



**SOCIAL SUSTAINABILITY AND ITS EFFECT ON THE BUILT FORM TOWARDS
A DESIGN OF A COMMUNITY ANCHOR IN DURBAN**

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of Master in Architecture

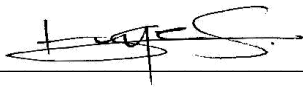
Durban

DECLARATION

I declare that this dissertation is my own, unaided work and carried out exclusively by me under the supervision of Dr Philippe Yavo. It is being submitted for the degree of Master in Architecture in the University of KwaZulu-Natal. It has not been submitted before for any degree or examination in any other University.

23 March 2015

Date



Claude John Heyes

DEDICATION

I dedicate my work to those living in the struggles of rapidly urbanising cities around the world who find themselves in the situations often described within this thesis. I further dedicate my work to my classmates, who over the years have helped me push through the long hours and have helped me reach this stage.

ACKNOWLEDGMENTS

This research document has been compiled with recognition of the following contributors:

- The Barrie Biermann Library Staff
- All my lecturers and professors over the years at the University of Kwa-Zulu Natal that have contributed to my growth as an Architect.

Thank you to my parents for their guidance and support over the years of my studies and to my father for all he has sacrificed for me to be able to be in this situation.

ABSTRACT

Social disorientation and segregation is a reality of the times. With more people than ever before confined to urban spaces, the built environment is being forced to play a more important role in the defining of social realms and sustainability of social groupings. The importance of these spaces is being highlighted within the commotion that is going on around them. The societal shift from a rural to a predominantly urban one is accompanied by vast changes in many phases of social life. Factors like urbanisation, urban sprawl and economic upheaval have led to hard times in South Africa, and many other countries in the world. Sustainability has largely been focused on in terms of its surrounding environmental issues and the social sector has been given less attention. There are arguments that social sustainability needs to be dealt with long before the issues of environmental sustainability can be addressed in full. Various life stresses plague modern day life; these include social relations, family pressures, inter alia environmental factors and career pressures, all of which contribute towards escalating life demands. These stresses justify a need for architectural interventions that focus not only on the physical improvement of an individual, but also on spiritual and mental growth and health of a community as a whole. Thus it is important for there to be a holistic architectural intervention that encompasses these aspects and gives some priority to the positive wellbeing of individuals and the communities that house them. Hence, the opportunity exists to explore the link between the built environment and the health of urban communities.

This study aims at researching the various factors that can be put in place to achieve a state of social sustainability and what affect this has on the built form and in turn how the built form affects this.

Are there ways as architects/urban designers and city planners to once again fuse the people of disconnected cities and create urban landscapes that have a positive effect on social cohesion, social capital and ultimately social sustainability?

The broader problems and issues revolve around what the requirements are to create a catalytic place and space where social cohesion is possible and fits the 'needs' and 'requirements' of the major groupings within South African society and how these spaces / places then promotes social sustainability through various theories.

A key question was, what is the effect of urbanisation on social sustainability within the modern city and how can the urban environment be used as a catalyst to reach a state of individual and community health, community cohesion and ultimately social sustainability?

TABLE OF CONTENTS

	Page No.
DECLARATION.....	1
DEDICATION.....	2
ACKNOWLEDGMENTS.....	3
ABSTRACT.....	4
TABLE OF CONTENTS.....	5
LIST OF FIGURES.....	10
ABBREVIATIONS.....	11

PART ONE - THEORY

CHAPTER 1 INTRODUCTION

1.1. INTRODUCTION

1.1.1. Background Statement.....	12
1.1.2. Motivation / Justification of the study.....	12

1.2. DEFINITION OF THE PROBLEM, AIMS AND OBJECTIVES

1.2.1. Definition of the Problem.....	13
1.2.2. Aims.....	13
1.2.3. Objectives.....	13

1.3. SETTING OUT THE SCOPE

1.3.1. Delimitation of Research Problem.....	14
1.3.2. Definition of Key Terms.....	14
1.3.3. Stating the Assumptions.....	15
1.3.4. Key Question.....	16
1.3.5. Hypothesis.....	16

1.4. THESIS STRUCTURE.....16

1.5. RESEARCH METHODS AND MATERIALS	
1.5.1. Research Methods	17
1.5.2. Research Materials	18
 CHAPTER 2 LITRATURE REVIEW	
2.1. INTRODUCTION.....	20
2.2. SUSTAINABILITY BROADLY.....	21
2.3. SOCIAL SUSTAINABILITY BROADLY.....	23
2.4. EMERGENT PRINCIPLES OF SOCIAL SUSTAINABILITY	
2.4.1. Introduction	25
2.4.2. Reorienting Development	26
2.4.3. Three Traditions of Research with Social Sustainability	28
2.4.4. Primary Constituents of Social Sustainability	33
2.5. CONCLUSION.....	38
 CHAPTER 3 THEORIES AND CONCEPTS	
3.1. INTRODUCTION.....	39
3.2. WELLBEING	
3.2.1. Introduction	39
3.2.2. Social Ecology Theory	40
3.2.3. Wellbeing and the Urban Context	42
3.2.4. Conclusion	46
3.3. CIVIL SOCIETY	
3.3.1. Introduction	47
3.3.2. Social Capital Theory	48
3.3.3. Civil Society and the Urban Context	50
3.3.4. Conclusion	57

3.4. EQUALITY AND GOVERNANCE	
3.4.1. Introduction	58
3.4.2. Participation Theory	58
3.4.3. Equity, Governance and the Urban Context	60
3.5. CONCLUSION.....	68

CHAPTER 4 PRECEDENT STUDIES

4.1. INTRODUCTION.....	69
4.2. REDEFINING CIVIC ARCHITECTURE - Imagin On Children's Library	
4.2.1. Introduction	69
4.2.2. Analysis	71
4.3. COMMUNITY COHESION - Kelvin Grove Urban Village	
4.3.1. Introduction	75
4.3.2. Analysis	75
4.4. COMMUNITY ANCHOR - Living Arts Centre	
4.4.1. Introduction	80
4.4.2. Analysis	80
4.5. CONCLUSION.....	84

CHAPTER 5 CASE STUDIES

5.1. INTRODUCTION.....	85
5.2. COMMUNITY ANCHOR - Baragwanath Transport Interchange	
5.2.1. Introduction	85
5.2.2. Analysis	87
5.2.3. Conclusion	91

5.3. COMMUNITY COHESION - Umkhumbane Community Health Centre	
5.3.1. Introduction	92
5.3.2. Analysis	92
5.3.3. Conclusion	95
5.4. CONCLUSION.....	96
 CHAPTER 6 ANALYSIS AND DISCUSSION	
6.1. INTRODUCTION.....	97
6.2. ANALYSIS.....	97
6.3. CONCLUSION.....	103
 CHAPTER 7 CONCLUSION AND RECOMMENDATIONS	
7.1. CONCLUSION.....	104
7.2. RECOMMENDATIONS.....	104
 REFERENCES	111
APENDIX 1	123

PART TWO – DESIGN REPORT

CHAPTER 1 INTRODUCTION

1.1. INTRODUCTION.....	138
1.2. PROJECT DISCRIPTION	
1.2.1. Typology	139
1.3. THE CLIENT	
1.3.1. Client Brief	141

1.3.2. Schedule of Accommodation.....	143
1.4. CONCLUSION.....	145
CHAPTER 2 SITE SELECTION	
2.1. INTRODUCTION.....	145
2.2. SITE OPTIONS.....	146
2.3. SITE SPECIFIC.....	149
2.4. URBAN DESIGN.....	150
2.5. CONTEXTUAL ANALYSIS.....	151
2.6. SITE ANALYSIS.....	153
2.7. CONCLUSION.....	154
CHAPTER 3 DESIGN DEVELOPMENT AND RESOLUTION	
3.1. INTRODUCTION.....	154
3.2. THEORETICAL FRAMEWORK.....	155
3.3. CONCEPTUAL.....	156
3.4. DESIGN DEVELOPMENT	
3.4.1. Main Ideas.....	158
3.4.2. General Design.....	161
3.5. TECHNICAL RESOLUTION.....	163
3.6. CONCLUSION.....	166

LIST OF FIGURES

2.2.1	Sustainability diagram.....	21
2.4.3.1	Emergent principles of social sustainability.....	28
3.2.3.1	Piazza Di San Marco.....	43
3.2.3.2	Central Park.....	45
3.3.3.1	The Laine, Brighton.....	51
3.3.3.2	Haggerston and Kingsland masterplan.....	52
3.3.3.3	Public space.....	55
3.4.3.1	Voice and influence.....	61
3.4.3.2	Medellin urban renewal.....	65
4.2.1.1	ImaginOn Childrens Library 1.....	69
4.2.2.1	ImaginOn Childrens Library 2.....	71
4.2.2.2	ImaginOn Childrens Library 3.....	72
4.3.2.1	Kelvin Grove Urban Village aerial plan.....	75
4.3.2.2	Kelvin Grove Urban Village.....	76
4.3.2.3	Kelvin Grove Urban Village streets.....	78
4.4.2.1	The Living Arts Centre.....	80
4.4.2.2	The Living Arts Centre lobby.....	82
5.2.1.1	Baragwanath gateway.....	85
5.2.1.2	Baragwanath gathering area.....	87
5.2.1.3	Baragwanath informal trade and seating.....	89
5.2.1.4	Baragwanath landmark.....	90
5.3.2.1	Umkhumbane Community Health Centre movement.....	92
5.3.2.2	Umkhumbane Community Health Centre street engagement.....	94
6.2.1	Response graph to question 4.....	97
6.2.2	Response graph to question 5.....	98
6.2.3	Response graph to question 6.....	99

ABBREVIATIONS

GDP	Gross domestic product
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
HDR	Human development report
GNP	Gross net profit
CBD	Central business district
KGUV	Kelvin Grove Urban Village
BTITM	Baragwanath Transport Interchange and Traders Market
UCHC	Umkhumbane Community Health Centre
CMDA	Cato Manor Development Association

1.1 INTRODUCTION

1.1.1 Background statement

Social disorientation and segregation is a reality of the times. Factors like urbanisation, urban sprawl and economic upheaval have led to hard times in South Africa, and many other countries in the world. Sustainability has largely been focused on in terms of the environmental issues surrounding it and the socio-economic theories have been given less attention. There are arguments that social sustainability needs to be dealt with long before the issues of environmental sustainability can be addressed in full.

Modern day life is plagued by various stresses, including inter alia environmental factors (noise and air pollution, traffic congestion, the declining quality of tap water and of food etc), family pressures (the demands and financial stresses of child education, family medical care, managing family relationships etc), social relations (single parenting, divorce, maintaining a social network etc) and career (achieving corporate goals and targets, career advancement etc) all of which contribute towards a set of life demands far higher than those of before.

1.1.2 Motivation / Justification of the Study

These stresses justify a need for architectural interventions that focus not only on the physical improvement of an individual, but also on spiritual and mental growth of community as a whole. Thus it is important for there to be a holistic architectural intervention that encompasses these aspects and gives some priority to the positive wellbeing of individuals and the communities that house them. Therefore, an opportunity presents itself to explore and investigate the possible link between architecture and the built environment and the health of urban communities.

With more people than ever before confined to urban spaces, the built environment is being forced to play a more important role in the defining of social realms and sustainability of social groupings. The importance of these spaces is being highlighted within the commotion that seems to be going on around them. The societal shift from a rural to a predominantly urban one is accompanied by vast changes in many phases of social life (Wirth, 1938).

Concepts of social sustainability should be focusing attention on the positive consequences of sociability and the possibilities that may be achieved through this and into almost all spheres of life.

1.2 DEFINITION OF THE PROBLEM, AIMS AND OBJECTIVES

1.2.1 Definition of Problems

This research explores the relationships between urban architectural environments and social sustainability. It will examine various architectural environments from the broader macro context down to the intermediate context and finally to the micro-specific context and considers each of these in terms of how they affect social sustainability and how social sustainability in turn affects the built form, from both a positive and negative point of view. Emphasis will be placed on how a positive socially sustainable environment can be created through architectural interventions and how these environments can benefit humans and the communities that house them.

1.2.2 Aims

This study aims at researching the various factors that can be put in place to achieve a state of social sustainability and what affect this has on the built form and in turn how the built form affects this. Are there ways as architects/urban designers and city planners to once again fuse the people of disconnected cities and create urban landscapes that are influenced by social cohesion, social capital and ultimately social sustainability?

1.1.1 Objectives

The broader problems and issues revolve around what the requirements are to create a catalytic place and space where social cohesion is possible and fits the 'needs' and 'requirements' of the major groupings within South African society and how these spaces / places then promotes social sustainability through various theories.

This study has nine main objectives which are derived from the research question.

These objectives were set:

1. To explore ways to restore quality and wellness into one's lifestyle and one's self.
2. To explore factors that promote social cohesion in the community.
3. To achieve a sense of belonging within societies and communities.
4. To investigate the effects of social capital and its positive influences on communities.
5. To unearth the role of healthy cities and communities in architecture.
6. To explore the built form in relation to social sustainability.
7. To find the main factors which militate against social sustainability?
8. To scrutinize the link between architecture and social sustainability.
9. To investigate urban health and its dependencies on the public realm.

1.3 SETTING OUT THE SCOPE

1.3.1 Delimitation of Research Problem

This dissertation deals with issues of social sustainability within the urban built environment. Urban sprawl, urbanisation, economic hardships and segregated communities all have a role to play in weakening social sustainability. Therefore exploring the urban built form in relation to social sustainability through the concepts and theories of social sustainability and the ways in which these may be applied to the modern urban environment in order to achieve healthy cities and communities.

1.3.2 Definition of Key Terms

Social Sustainability: Development (and/or growth) that is compatible with harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population. (Polese and Stren, 2000).

Public Architecture: Civic architecture that has the potential to become the cornerstone of a society, a catalyst for community cohesion and a gathering point and ‘front porch’ for all within the community (Project for Public Spaces, n.d).

Wellbeing: Viewed as a position where one is in a state of absolute physical, mental and social wellbeing. Also closely related to health and the environment (Easthope & White, 2006).

Genius Loci: Creating a ‘sense of place’ within the macro, the inter-mediate and the micro-specific context (Norberg-Schulz, 1980).

Participation: Members of the public ‘taking part in any of the processes of formulation, passage and implementation of public policies’. This is a wide-ranging definition, which extends the emphasis of public participation beyond the development of policy, to decision-making and implementation (Stoker, 1997).

Community: Consists of persons in social interaction within a geographic area and having one or more additional common ties (Hillery, 1955).

1.3.3 Stating the Assumptions

- It is assumed that many cities and many buildings are not contributing to the social sustainability of communities.
- Urban sprawl will continue to increase and be detrimental to the making of ‘communities’.
- Economic difficulties will continue and communities will have to rely on each other to help each other through the tough times they may face.
- Modern day life is clouded by stressors and this can contribute to a set of increasing life demands. These demands are assumed to be dealt with better as a community or family rather than as an individual.

1.3.4 Key Question

- What is the effect of individual and community health, community cohesion and social sustainability on urbanisation on social sustainability within the modern city and how can the urban environment be used as a catalyst achieve this?

1.3.5 Hypothesis

Social sustainability is to lead to themes that include interaction and coming together of the community and social networks, instils community participation, leads to a sense of pride and place, security and economic empowerment and guides community sustainability. It can be assumed that architecture, if correctly executed, can be a catalyst and is able to facilitate and support a move back to holistic wellbeing through positive architectural environments regardless of the diversity of cultures, their respective identities and perceived needs.

1.4 THESIS STRUCTURE

This thesis is sub-divided into 6 chapters as follows.

1. CHAPTER ONE: INTRODUCTION presents the research context, the justification for the study, the research question, statement of the research problem, conceptual framework, aims and objectives, working hypothesis and the research scope and limitations. Defines the research key terms and outlines the structure of the thesis.
2. CHAPTER TWO: METHODOLOGY discusses the methods used for this study and the research design. It outlines the methods used for data collection, the data sources and data analysis.
3. CHAPTER THREE: LITRATURE REVIEW provides an appraisal of previous literature enabling to understand ‘social sustainability’ and the discourse that surrounds it. This chapter analyses relevant archives, literature and knowledge relating to the study.

4. CHAPTER FOUR: PRECEDENT STUDIES analyses relevant architecture from abroad and local that entail similar characteristics or use principles that further give understanding to socially sustainability in architecture.
5. CHAPTER FIVE: CASE STUDIES discusses, by firsthand experience, local examples of architecture that further broaden the knowledge of the thesis topic.
6. CHAPTER SIX: ANALYSIS AND DISCUSSION presents a sum-up of the findings of the study.
7. CHAPTER SEVEN: CONCLUSION AND RECOMENDATIONS provides the principle findings, matches these to the stated hypothesis and discusses the overall findings in relation to the research question. It evaluates the principle conclusions drawn from the findings and offers recommendations for further studies.

1.5 RESEARCH METHODS AND MATERIALS

This dissertation will explore two forms of study, empirical and non-empirical study. The empirical study will explore the use of primary data in the form of case studies, surveys, questionnaires and text data. The non-empirical approach will deal with secondary data in the review of literature. This section deals with the research methods and materials that the researcher will use to require the knowledge to inform this dissertation and make it possible.

1.5.1 Research Methods

For the purpose of this dissertation a combination of both primary and secondary sources are required to obtain the relevant information.

Primary data collection allows the researcher to test the validity of the hypothesis. This testing therefore involves the comparison and the evaluation of data obtained from both primary and secondary sources to obtain a final analysis of the data collected.

Secondary research methods help the researcher obtain important knowledge on the topic. This knowledge helps establish a general understanding around the key research questions and provides information that can determine the outcome of the hypothesis. Once the researcher has completed the collection of information through secondary sources, he has to decide the kind of data collection method to use. This could possibly be done by numerous ways such as an observation, questionnaire, interview, survey, scales or journals. The type of data collection method depends on what type of data is required for a particular research problem. In addition, the answers that are being sought will decide what type of analysis is needed. Due to the nature of the topic the research is to be qualitative rather than quantitative. However, the methods employed must have neutrality: the researcher does not set out to prove a particular viewpoint or manipulate data to get an outcome. The key is to ask relevant questions to meet the aims and objectives of the dissertation.

1.5.2 Research Materials

1.5.2.1 Primary Research

The primary research methods include:

- **Case Studies:** The Case Studies are selected as they are real life examples of what the concepts and theories mentioned in this document are capable of producing. They further reflect the positive impact both architects and urban designers can have on the people that use these spaces, as well as enhancing both social interaction and well-being in architectural environments. These studies involve visiting the site or building, photographing and critically assessing buildings or spaces relevant to this study through the methods explained below. Drawings are to be obtained and analysed with conclusions being supported by personally produced graphic and photographic data.
- **Questionnaires:** Questionnaires are the formal method employed to carry out surveys. Questions may vary from specific to a broader context. The questionnaires will be distributed to various trained professionals through email. The contents and findings of this questionnaire will be discussed in detail under analysis and discussion and to aid in creating a final conclusion to the dissertation.

- Still Photography: This will be used to capture single events and events over time for the purposes of supporting or dispelling assumptions / theories.
- Observation: To critically analyse the selected case studies at their respective sites

1.5.2.2 Secondary Research

Secondary information forms the foundation for the research on social sustainability and architecture. This information is found through research obtained from a literature review of the existing body of knowledge, in the form of:

- Books: These provide historical and theoretical information used to make sense of the recent data in journals and books.
- Journals: These provide recent data, knowledge and discussion relating to the topic.
- Newspapers: These provide recent data, knowledge and discussion relating to the topic.
- Electronic resources (e-books, e-journals, articles): The internet provides access to current papers from around the world otherwise unattainable in the traditional library.

A critical analysis of this literature provides the framework and criteria by which case studies and precedent studies are to be analysed. Precedent studies fall under secondary research. For the purpose of this dissertation a number of both international and local architectural environments and buildings are identified as relevant to the subject matter and are analysed through photographs, architectural drawings as well as text media. The studies of the various precedents is to provide the researcher with practical insight into the existing theories on social sustainability and architectural as they can be seen in the built environment.

The primary (empirical) data and the secondary (non-empirical) data will be obtained from this research document. These data sources are combined together to come up with valuable conclusions and analysis with the intension of informing the design of a civic building for Durban.

2.1 INTRODUCTION

Due to urbanisation, cities have become the world's central places to live, this is not only due to population growth but because cities are seen as providing the only possible opportunity to escape poverty and assume a life that leads towards full economic and social life. Therefore people are at the centre of the dilemma and therefore should naturally be placed at the centre of the solution in order to achieve the necessary insight to confront this challenge.

Urbanisation is perceived by some to be the problem, paradoxically (Smith, 2011) believes it can be the solution because it may also provide paths out of impoverishment and poverty and lead to opportunities for a greater future. All countries economies progress hand-in-hand with their cities, in the United States 90% of the Gross Domestic Profit (GDP) comes from urban areas (Smith, 2011). This is no different in third world countries as a large percent of informal trade occurs within the formalness of the cities. During this period of mass urban migration, economic growth and environmental climate change, it is crucial to establish thriving sustainable cities and yet at this stage we find ourselves falling far short in being equipped to come to terms with this shift. Various development trends remind us that our capacity to live with large scale impoverishment, marginalisation, insecurity, violence and hunger are not forthcoming and therefore so too are not the necessary radical changes in our quality of life.

Duffield (2010) expresses the consequences of urbanisation on social sustainability resulting in numerous associated health issues and challengers. These issues and challengers are facilitated by the composition, structure and morphology of the surrounding built environment. This highlights the opportunity to explore the link between health of community, social sustainability and the built environment.

According to Roseland (1997) the 21st century is the urban millennium. More than half the world's population will be, for the first time, living in urban areas. The challengers for the urban millennium will be to maintain and improve the health, wellbeing and quality of life for

the increasing population. Sustainable processes will have to be put in place to provide future generations with, at least an equal opportunity to have as high a quality of life as what has gone on before them. Roseland (1997) goes on to argue for a sustainable development that varies from the usual. Sustainable development has largely been seen as environmentally sustainable ecological development. This is in its own right a large topic of discussion and highly important. What is relative to this research topic is not limited to the natural environment and natural resources. Environmentally sustainable ecological development plays only a supporting role, yet an important, undivided role.

Sustainability and sustainable development are viewed as a philosophy, mandate, public vision, constraint, mission, goal, marketing ploy, principle, criteria and/or a movement and therefore are viewed variously as many things to many people. Wang (2004: p.26) proclaimed that “sustainability should not be a rigid doctrine that we impose at any cost, but instead a liquid concept that we pour down the path of least resistance”.

2.2 SUSTAINABILITY BROADLY

Sustainability is fundamentally about the choices people make and the associated consequences thereof. Ismail Serageldin (1993: p.2) notes “People are the instruments of beneficiaries, as well as the victims, of all development activities”.

The Brundtland Commission Report is generally seen as having conceived the basic concept of sustainability. The report went on to define sustainability as “Development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (World Commission on Environmental Development, 1987: p.43).

Many authors note that there is in fact no overall all-inclusive theory of sustainability, although there are a large number of constructs and linkages (think of them as strands of DNA) that occur throughout the many discourses of sustainability.

Dillard et al. (2009) depicts sustainability as comprising of three, mutually dependent yet overlapping goals:

1. Living in such ways that is seen as environmentally sustainable or feasible over a long period.
2. Living economically sustainably – living in such ways as to maintain living standards over a long period.
3. Living in ways, now and in the future, that is socially sustainable.

Sustainability is often broken down into three segments, commonly known as the three E's in urban planning discourse: Economy, Equity (social) and Environment. Hence sustainability occurs in three foundational constructs and three fundamental dimensions: Environmental, Economic and Social. An intimate connection must be kept between these three concepts and this must occur simultaneously for sustainability to thrive.

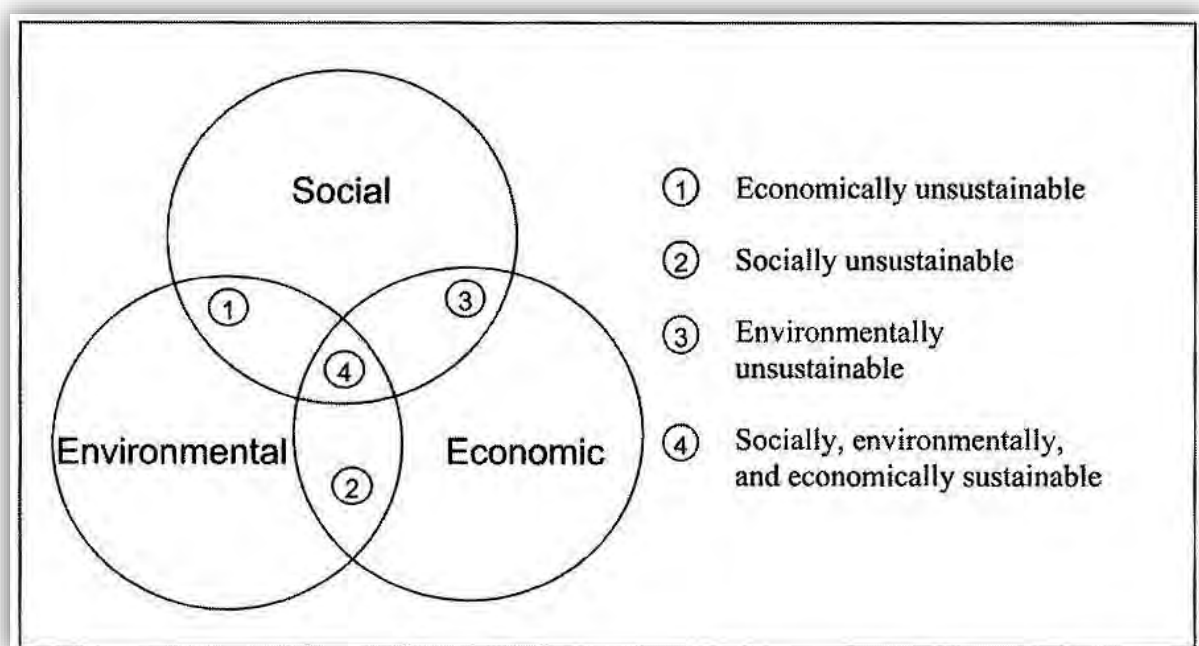


Figure 2.2.1: Sustainability requires consideration of all three dimensions. It is not a proposition that can stand alone. (Dillard, Dujon & King, 2009)

“The cities of the 21st century must place the citizen at the centre of the public policy, reinvent the concept of the city, and realise the many ways in sharing in urban life” (Polèse and Stren, 2000). Tackling sustainability requires placing people at the centre of the solution and is seen as principal to gaining the necessary insight.

As a set of values, as a science, societal goals, as an approach to dealing with problems in the real world, sustainability is in its beginnings and the social pillar of sustainability is the least developed of all three. This study believes its defining task is no less than:

1. Harness global capitalism to benefit human needs equally.
2. Secure human and community well-being in the world order.
3. Mediating the impacts of an earth that we find suddenly finite.

2.3 SOCIAL SUSTAINABILITY BROADLY

Keeping in mind the intimate connection between the three concepts of sustainability and the idea that they must occur simultaneously for sustainability to thrive, this study goes on to focus on the social construct of sustainability, yet describes how focusing on the social aspect can in turn lead to growth and prosperity in both the economic and environmental facets.

The environmental and economic facets of sustainability, as of today, have cast a shadow over the social aspect of sustainability and have left this construct comparatively ignored and therefore far less understood. Many people, theoretically and in practice, are looking to integrate the social concerns of sustainability into their work.

The first chance in budding a workable understanding of social sustainability is realised within a plausible definition. Social sustainability is inherently complicated and many theorists have struggled to break it down to its basic roots without mentioning human development. Therefore human centred development could be read as a sub-topic off social sustainability. Human centred development talks of the attainment of human potential and requires economic activity that is both socially and environmentally sustainable in order to achieve this. The United Nations (UN) describes human centred development as enabling individuals to meet or enlarge their capabilities and to put this to best use economically, socially, culturally and politically (The United Nations Development Programme, 1990) (UNDP).

As a component of human centred development social sustainability has gained recognition. Sustainable development debate has been dominated by environmental and economic issues.

If you break down sustainable development into its various dimensions (social, economic, environmental) there is an agreement that they have not been equally prioritised.

At this time a clear or widely accepted definition of social sustainability still has not been consented upon. Polèse and Stren (2000), writing up the findings of a United Nations Educational, Scientific and Cultural Organisation (UNESCO) project on the social sustainability of cities, identify social sustainability as “policies and institutions that have the overall effect of integrating diverse groups and cultural practices in a just and equitable fashion” (Polèse and Stren, 2000: p.229).

Many have tracked Robert Putnam (2000) in his investigation of *social capital*. Putnam (2000) describes social capital as the networks and normalities that assist cooperative action. The idea of *social capital* is an attempt to use the concept of capital to understand the role of social institutions and processes in the economy. Similarly economists have used *natural capital* to describe natural resources and amenities. Those who continue in this line of thinking believe that social capital is a resultant from the participation within civic institutions, and requires social capital to be upheld generously for future generations in order for social sustainability to be achieved. This seems to fall short of an all encompassing definition yet may be a backbone for social sustainability to build from.

Harris and Goodwin (2001) when describing social sustainability, gives a more calculated and agreeable definition: “a socially sustainable system must achieve fairness in distribution and opportunity, adequate provision of social services, including health and education, gender equity, and political accountability and participation” (Harris and Goodwin, 2001: p.29).

This definition, although more all encompassing, seems to miss Robert Putnam’s idea of the more social processes required to achieve social sustainability.

These social processes that Robert Putnam introduces must be understood as:

1. The actions that spawn social health and wellbeing now and looking forward, and
2. Social organisations that assist in the creation of economic and environmental sustainability, now and for the future.

Personally, Polèse and Stren (2000: p.16), combine all of this the best as they go on to say “social sustainability must, among other things, seek to bring people together, to weave the various parts of the city into a cohesive whole, and to increase acceptability to public services

and employment, with the framework, ideally of a local governance structure which is democratic, efficient and equitable”. In this one can pick up the social capital stand that Putman discusses as well as the idea of equity and democratic governance that Harris and Goodwin describe fused together with the idea of civil society that Polèse and Stren depict in their definition of social sustainability.

Undoubtedly, social sustainability concerns the ability of human beings. Most importantly, for human beings of all generations, to not merely survive but to thrive. Ultimately, it is human beings, collectives/communities or as individuals, that will determine the remaining two constructs of sustainability- economic and environmental wellbeing. Social sustainability is of value in its own right as it focuses on us as human beings and goes on to play a paramount role in the continuous journey toward sustainability.

The conclusion to this draws from lessons from the three traditions spoken of- human centred development, sustainability and community wellbeing. Although each is unique, they have evolved over the same period of time, each responding to similar environmental, social, economic and political conditions. The outcomes support four conditions critical to social wellbeing and hence social sustainability:

Human wellbeing, Equity, Democratic Governance and Democratic Civil Society.

These four principles are discussed now as the primary constituents of social sustainability.

2.4 EMERGENT PRINCIPLES OF SOCIAL SUSTAINABILITY

2.4.1 Introduction

Robert Prescott-Allen (2001) describes social wellbeing as the fulfilment of basic needs and the freedom to exercise social, economic and political freedoms. The concept of social wellbeing and, hence, social sustainability is further defined by three traditions of research, as discussed in the last chapter: Human centred development, Sustainability and Community wellbeing.

Although these traditions are unique, they arise and have been developed from the same foundation and over the same period of time, hence growing markedly similar. Emerging from these three traditions are born four universally discussed and accepted principles of social sustainability (often named with slight variances):

1. Human Wellbeing
2. Equity
3. Democratic Government, and
4. Democratic Civil Society

These social principles were designed to define and facilitate social wellbeing and, as such, provide a rich foundation for the construct of social sustainability.

2.4.2 Reorienting Development

Firstly, before discussing the emergent principles of sustainability, this research would like to understand how one goes about measuring growth and the intricacies of measuring it in order to understand the true progress made by social sustainability in comparison to systems that are currently in use and the way in which these current systems misconstrue the outcome, to the downfall of sustainability.

Economic growth and income expansion are and will always be, central to development. Critiques however have emerged from several angles and these all have to do with the growth model and its primary indicator of success- Gross Domestic Product (GDP).

The idea however, is that growth is not necessarily synonymous with development. Herman Daly (1996) differentiates these two, saying development is a qualitative change whereas growth is a quantitative increase. Growth speaks of increase in resources whereas development speaks of a better state. An extreme inequity has formed where an ever rising number of people are becoming permanently unnecessary to the world's economy, adding to the worlds immense number of people left malnourished and subject to poverty. Running in conjunction with this, wealth expands exponentially, for an extremely small portion of the worlds people. The result of these conditions is widespread and abject poverty accompanied by extreme wealth. This highlights the devastating effects of market liberalisation and the elimination of a basic system of social security. The combined effect of these two situations

has led to the undermining of values important to societies wellbeing and has ultimately led to the decline of civil society.

The GDP, or growth model's indicator of success, in use in today's world, has two critiques that present serious challenges. The GDP's first review is that it is a partial and inaccurate measure of economic wellbeing as it is a gross tally of economic dealings, all of which are to be presumed positive. It does not account for transactions that result in social or environmental *bads* nor does it highlight those that contribute to social or economic wellbeing, or *goods* (Dillard, Dujon & King. 2009). Urban sprawl, pollution and decimated inner cities exist concurrently with job growth, new housing and road improvements. This highlights the way in which the GDP confuses these societal *bads* and camouflages them as contributions and creates the misleading impression of a stronger economy and improved wellbeing.

The second criticism of the GDP concerns its relation to human wellbeing. As shown already, growth in GDP is only weakly linked to human wellbeing. The Index of Social Health, a standard measure of inequality, measures the gap between the rich and the poor in the United States (Miringoff and Miringoff, 1999). From 1970-1996 although the GDP grew by 158%, social health worsened by 38%. (Miringoff and Miringoff, 1999) concluded that growth is not related to social health. The GDP fails to demonstrate wellbeing; data such as this reinforces that, further prompting the development of more precise measure, such as the Genuine Progress Indicator (Atkinson, 1997). The means- growth- is being confused with the ends- human development (Haq, 1999). The appropriate end is human development, not growth.

Such indicators of success need to be reviewed as to focus upon human centred development and social sustainability. Social indicators need to be able to highlight the effects of certain decisions and actions in relation to the ultimate vision for human centred development and social sustainability and generate information that can be utilised to inform policy analysis, decision making.

2.4.3 Three Traditions of Research within Social Sustainability

As spoken about before, there are three traditional lines of research within social sustainability. In this section an overview of each is illustrated and then the characteristics central to each of these are described. Broken down in figure 2.4.3.1

1. Human Centred Development Approach

This line of research is defined by three primary constructs:

- a) Basic Needs Approach
- b) Human Development Approach, and the
- c) Freedoms Approach

a) Basic Needs

The Basic Needs Approach (Streeten, 1981), designates the world's poor as the primary beneficiaries of development and requires a minimally acceptable level of wellbeing and human rights. Through this line of thinking an individual's full physical, mental and social development is important. Therefore, although nonmaterial needs such as self-determination, self-resilience, security, participation in decision making, identity etc. are considered important, the focus here is on the basic physiological needs, for example, sanitation, shelter, water and nutrition. The World Commission on Environment and Development (WCED) designated poverty alleviation as one of the two prime objectives of sustainable development as it perceived fulfilment of basic needs as so important. Streeten (1981) outlines the primary objectives of the basic needs approach as: (a) remunerative livelihoods that accord people a primary claim on the fruits of their labour, as well as income adequate to purchase basic sustenance; (b) a social infrastructure capable of delivering public services, including education, health care, water and sanitation; and (c) people's democratic participation in the policies and projects relevant to their lives.

Human-Centered Development			Sustainability		Community Well-Being 1990
	Basic Needs 1976	Human Development 1990	Freedom 1999	Agenda 21 Rio Declaration Forests Principles 1992	
Human Well-Being	Objective 1: Basic Sustenance - Nutrition; Education; Health; Sanitation; Water Supply; Housing	Productivity Empowerment	Protective Security Social Opportunities	A21 - Sec. I: Social & Economic Dimensions Rio - Healthy, Productive Life; Eradicate Poverty Forest - Social, Economic, Ecological, Cultural & Spiritual Needs	MP - C6: Cultural & Spiritual Needs & Values; Employment & Community Needs LUCID - Institutional & Community Capacity; Social & Cultural Values Mt. Hood - Community Livability
Equity	Equitable Economic Opportunity	Economic Equity Political Equity	Economic Opportunities	A21 - Sec. I: Social & Economic Dimensions Rio - Reduce Living Standard Disparities	LUCID - Social Equity; Social & Cultural Values Mt. Hood - Social & Cultural Values
Democratic Government	Objective 2: Social Infrastructure Producer, Rule of Law, Financier	Political Freedom	Transparency Guarantees Civil Rights Political Freedom	A21 - Sec. IV: Governance, Rule of Law Rio - Environmental Laws Forests - Policy Inclusive and Protective of People	MP - C7: Institutional Framework LUCID - Institutional Capacity; Collaborative Stewardship Mt. Hood - Institutional Adequacy
Democratic Civil Society	Objective 3: Democratic Participation Self Determination, Participation National and Cultural Identity	Empowerment Political Freedom	Civil Rights Political Freedom	A21 - Sec. III: Democratic Participation Rio - Citizen Participation; Indigenous, Women, Youth Forests- Wide Participation	MP - C7: Public Participation LUCID - Community Capacity; Collaborative Stewardship Mt. Hood - Collaborative Stewardship; Community Resilience
					Community Inclusion in Public Policy Democratic, Efficient & Equitable Complement & Facilitate Communities Informed Public Dialogue & Decision-Making Collaboration Social Integration and Inclusion

Figure 2.4.3.1: Emergent principles of Social Sustainability. (Dillard, Dujon & King. 2009)

b) Human Development

The Human Development Approach was championed by Haq (1999) as well as the UNDP. This approach considers the basic needs approach yet then transcends this to include its ultimate objective- an enabling environment that promotes long, healthy and creative lives. The UNDP of 1990 describes it as continually enlarging people's choices in all of life's spheres: economic, social, cultural and political.

The human development approach prioritises democratic governance to direct economic activity towards the desired societal needs. This process is intended to enhance the wellbeing of the people. According to Haq (1999) this approach includes four components: equity, sustainability, productivity and empowerment.

Based on the idea that equitable distribution of wealth is important to human development, equity goes on to refer to access of political and economic opportunities including; elimination of social, economic and legal barriers and the distribution of political power to the majority. Inter- as well as intra-generational equity stands central to the idea of sustainability, and sustainability goes on to dictate that the disparities within and across nations be eliminated.

Productivity refers to the contribution that people make to economic development. Haq (1999) argues the people become the primary beneficiaries of the production process and not seen as only an input into it, hence their wellbeing becoming the purpose for economic development.

Empowerment requires the investment in people and refers to people's legitimate and ongoing engagement in the policies and practices that influence their own lives.

The UNDP (2004) developed the Human Development Index which is to track progress toward equity, sustainability, productivity and empowerment. The only downfall of this however is that it only presents a partial gauge to the social scope of human development. Missing are indicators that include political freedom. As elaborated in figure 2.4.3.1, these four components that describe human development align perfectly with the four principles of social wellbeing (sustainability).

c) Freedoms

With the thoughts and concepts of sustainability came the dialogue and exploration of human wellbeing. This dialogue was broadened by Sen (1999) to incorporate human freedoms, stating that freedoms are of elevated importance. The celebration of freedoms and the removal or prevention of un-freedoms is both the primary ends and the principle means of development.

The ability of an individual to effect and embrace the world around them comes through freedom, freedoms allow an individual to effect change in their lives. These freedoms Sen (1999) states are facilitated by the processes that enable decision making and by the availability of opportunities for decision making.

Sen goes on to outline five critical freedoms: economic facilities, protective security, political and civil rights, transparency guarantees and social opportunities.

Economic facilities refer to opportunities to engage in remunerative activities. Economic opportunities are entitled so far as the individual has access to resources, including finance, skills, land etc. which one puts to use for production or exchange. The freedom to participate competitively is crucial because this enables people to fend for themselves. Un-freedoms on the other hand lead to forced separation from the market place which leads to unemployment and ultimately diminishes people's ability to sustain themselves and their families, and in the longer term this leads to social exclusion.

Sen (1999) asserts that because of this danger of people being disaffected by the market, protective security is the next freedom. As a social safety net, protective security is to prevent people from falling into the grips of poverty. Income supplements and ad hoc measures to cover emergencies are the provided protections of this.

Political and civil freedoms have intrinsic value. These refer to the opportunities people have to participate in governance, including freedom of dialogue and dissent, assembly, political affiliation, voting and accountability from political figures. Social, political and economic lives are restricted if one is deprived of the right to participate in crucial governance issues. Transparency guarantees are closely related to political and civil freedoms, and ensures openness and full disclosure, promoting an environment of trust.

Lastly social opportunity, which Dillard, Dujon & King (2009) expresses to include: public assurance of services vital to enabling people's ability to access the other freedoms, including education and healthcare.

These five freedoms go on to align, as seen in figure 2.4.3.1, with the emergent principles of social wellbeing

2. Sustainability Approach

The tradition of sustainability influences many facets of contemporary society, from individual lifestyles to design and management of urban centres to management of natural resources. Figure 3.4.3.1 goes on to break down sustainability as seen through internationally recognised agreements.

For example Agenda 21, reached at Earth Summits held in Rio de Janeiro in 1992 and Johannesburg 2002, goes on to describe that social and economic dimensions provide definition to both human wellbeing and equity. Strengthening democratic participation is a direct articulation of democratic civil society and means of implementation addresses governance and the rule of law, stipulating important principles of democratic governance.

3. Community Wellbeing Approach

The community wellbeing movement is comprised of multiple self-organising movements focused on healthy communities, liveable communities, civic democracy, safe communities, quality of life, social wellbeing and sustainable communities. Although these cover a variety of interests, they share many principles, frameworks and conventions which do not conflict. Polèse and Stren (2000: p.15-16) describe a definition of sustainable communities which accurately attends to the principles and goals shared by these movements. Social sustainability is “....development that is compatible with the harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population”.

Indicators within community wellbeing are strikingly similar and focus broadly on the four surfacing principles of social sustainability: liveable communities (wellbeing), democratic civil society, equity and democratic governance.

Liveable communities – A direct reflection of human wellbeing addresses basic needs.

Equity – Addresses equal access and social justice for all.

Democratic governance – Refers to governance that promotes community participation.

Finally, democratic civil society – Addresses informed public dialogue and decision making. All the above results in enhances skills and knowledge, strengthened relations, improved communications, greater community initiative and increased community adaptability, all of which are critical to the further development of social capital.

2.4.4 Primary Constituents of Social Sustainability

From the above comes the realisation of four key principles. The four primary constituents of social sustainability:

(a) Human Wellbeing (b) Equity (c) Democratic Government and (d) Democratic Civil Society.

Two criteria's from the 2002 Human Development Report (HDR) are used to select ideas that will take precedence over others. First, the idea must be universally accepted by people throughout the world, and second, it must be so fundamental that its absence would close off many life options. The following fulfils these two criteria and therefore substantiate.

Human wellbeing, equity, democratic government and democratic civil society emerge as principles shared by citizens and local communities around the world, as well as by regional, national and international governments (Dillard et al, 2009).

The proposal that human wellbeing, equity, democratic government and democratic civil society are the primary components of the social aspect of sustainability is corroborated in the following definitions.

Social sustainability requires equity within and between generations, cultural integration, widespread political participation, community ownership and self-determination (McKenzie, 2004). Harris (2000) believes that a socially sustainable ideology has to achieve sufficient social services, participatory and pluralistic democracy, distributional and gender equity as well as political accountability.

a) Human Wellbeing

It is important to first understand the variance between social and human wellbeing. Dillard, Dujon & King (2009) express that social wellbeing refers to a community of people and will go on to address all four primary constituents of social sustainability. Human wellbeing is

more focused and concentrates on the individual and the fulfilment of basic needs. Social sustainability assumes that basic needs are met for all members of the community.

When describing social wellbeing, Prescott-Allen (2001), maintains that it is achieved through the fulfilment of basic needs, as well as through political, economic and social freedoms. Haq (1999) goes on to add that social wellbeing is realised when people and communities may go on to enjoy lives that are long, healthy and creative and are able to constantly broaden their choices in life affairs.

A problem arises when one speaks of social wellbeing and economism within the same breath. Robinson and Tinker (1997) argue that social wellbeing needs to be decoupled from economism. While social wellbeing may perceive economic development as a means to make valuable strides forward in human wellbeing, economism sees economic development as the end, and it distinguishes attainment of prosperity as society's ultimate goal. As stated by Haq (1999: p.4), "We have finally begun to accept the axiom that human welfare- not GNP- is the true end of development". Economic development must not imperil human wellbeing.

The importance of decoupling social wellbeing from economism is reflected when one realises the fact that income expansion does not automatically improve social wellbeing and in fact does the contrary. In fact, human poverty and mass consumption societies are implicated as the prime culprits of environmental degradation (Dillard, Dujon & King. 2009).

If human wellbeing includes the fulfilment of basic needs which include food, water, shelter as well as the capacity and opportunity to engage in economic endeavours in order to achieve these, then Prescott-Allen (2001) defines it well in saying that it includes the ability to meet ones needs, the opportunity to be live a fulfilled life in a secure environment with the guarantee of human rights.

The traditions of research- Human-Centered Development model, Freedom Model, Sustainability model and the Community Wellbeing movement all accept and incorporate Streeten's (1981) conception of basic needs, yet elaborate for it to include social and political freedoms as well as going on to express that the fulfilment of these needs and freedoms is a basic human right.

b) Equity

The World Commission on Environment and development holds that development is a “....progressive transformation of economy and society.... Physical sustainability cannot be secured unless development policies pay attention to such considerations as changes in access to resources and in the distribution of costs and benefits” (1987: p.43).

A support structure for equity dates back to Streeten (1981) and the Basic Needs Approach as well as being discussed through all the other traditional fields of research regarding social sustainability. Within the Communities movement, social sustainability is linked with the degree to which inequalities are reduced, highlighting equities paramount importance.

Within the sustainable community, it is describe that environmental damage is the cause of inequality and that the eradication of inequities should be of the greatest importance. Within the Human Centred Development community equity is seen as a basic human right, both in politics and economic opportunities. Poor countries bring to light these problems, market and policy failures hinder poverty alleviation.

The idea of Sufficiency of Sustenance (Euston and Gibson, 1995) creates an equal standard of enough for all, without excess and wastefulness, with the gross gap between wealth and income eliminated and this contributing to the basic needs of all being met in an equitable fashion.

c) Democratic Government

Democracy in its own right is a valuable commodity and is the basis to human development. Democracy provides oneself with information and skills critical to make choices, a voice, the freedom and the opportunity to actively participate. The link however, between democracy and human development is not automatic. Social justice, discrimination and inequalities are common in democracies. Democracy is threatened by those with excess wealth as they pursue private interests at the expense of public good as they abuse their economic and political power, robbing the majority of its voice.

Democracy can very well support human development, however for this to happen a conscious choice is to be made for it to be facilitated by deliberate and strategic decisions, strong governing institutions, and democratic politics. Democracy, in its many forms worldwide, takes on two core principles, participation and accountability.

As Stiglitz (2002) suggests, people share a “social contract” with their governments, a trust that is exposed to the realities of day to day living, sharing in the burdens and benefits. Civil society ultimately governing in collaboration with government. Democracy is in essence the rule for the people by the people. This shared responsibility for the governing of a society is called governance and is differentiated from government, which addresses only government organisations (Dillard, Dujon & King, 2009). However, in the wrong environment, one that lacks a living structure, an individual’s freedom of spirit may become either weak or even destroyed.

Democratic government ensures that governance is oriented to the people, stabilising the community and advancing the democratic cause. Government is the holder of the public trust, because of its considerable impact on people’s lives, and because of this must be responsive to its people and accountable for its decisions made. Ungoverned markets and growth-oriented development do not protect human rights or preserve equity; rather, equity requires collective political actions. These actions, or decisions, must be enforced by government institutions through democratising and directing the market and ensuring reforms and redistributive measures are consistently and effectively implemented (Harrison, 2002). Government, while being a stabilising force in society, protecting basic needs and rights, is also a stabilising force in allowing the space for the contestation so critical to democracies, open space for political opposition. Government role extends past that of protecting basic rights and needs and continues to encompass fundamental freedoms, protection from discrimination, elimination of poverty, expansion of choices in all realms of life and protection from economic, physical and political catastrophes (Dillard, Dujon & King, 2009).

By facilitating civil society’s engagement and being responsive to its people, government cultivates the democratic polity, nurturing and reinforcing a democratic culture and in turn sustaining democracy. The UNDP (2002) goes on to say that responsive governments are accountable to the people, ensuring economic and social policies address people’s needs and aspirations, ensuring the vote to those who bear the costs, limiting the rights and powers of absentee owners, and holding decision makers liable for the harm of their actions. We see all too often in the present day, governments that feel they are above the law and that the people are there to carry out the works of what they want achieved, rather than governments working to please the people.

d) Democratic Civil Society

Through volunteerism, whistle blowing, norms development, oversight, contentious politics and collaboration in decision making, civil society has forced its presence into governance and continued on to broaden democratic space, strengthen democratic institutions and promote social change (Salamon, 2004).

The promotion of civil society's participation in democratic governance is referred to as the "...third pillar of 21st century human development strategy" (UNDP, 2002: p.53) and goes on to state that collective action by civil society is an emerging consensus.

Florini (2000) describes that theorists have contributed significant social changes to civil society's active agency, including matters like human rights, democratic governance and development, conservation and peace.

Generative and countervailing forces are provided by civil society. Generative in its creation of civic space and empowerment of people to use this space for the deepening of democratic practices. These civic spaces are important, as de Tocqueville (1969) emphasises, in that through association people interact, find common ground and empower and inspire each other to engage in activities to promote the common good.

Countervailing forces are provided by civil society in that civil society's ever present diligence induces government to work democratically (Gahin and Patterson, 2001). Sen (1999) elaborates that through the exercise of political rights, civil society educates and builds consensus about its needs and its responsibility to play an active political role in ensuring that those needs are met.

It is the role of civil society to ensure that government is performing according to the will of its people. Civil society will always be, to a point, divided among itself especially in a democracy like South Africa where diversity is celebrated. Due to this inherent discord, civil society must be devoted to prevent government abuse of citizens' rights (Bello, 1994). Civic engagement and inclusion in governance is paramount to democracy (Sen, 1994).

2.5 CONCLUSION

Social sustainability concerns the ability of human beings of every generation to not merely survive, but to thrive. Social sustainability plays a paramount role in the continuous journey towards sustainability, because ultimately it is human beings that will determine wellbeing. Lessons from the three traditions – Human-Centred Development, Sustainability and Community Wellbeing each respond within to similar environmental, social, economic and political conditions and their responses overwhelmingly support the four primary constituents of social sustainability. These constituents create a self-reinforcing virtuous cycle that enables movement toward environmental sustainability, balances multiple and divergent interests, guides sustainable economic policies and develops resilience to manage the changes, reversals and surprises inherent in systems (Dillard, Dujon & King. 2009).

With a thorough understanding of the constructs of social sustainability, one may now begin to address the built environment and fully understand the possibilities of social sustainability through design.

3.1 INTRODUCTION

Theories and Concepts is broken down to resemble and dissect each of the four primary constituents of social sustainability. Each constituent is coupled together with a key theory and its underwriting concepts.

3.2 WELLBEING

3.2.1 Introduction

Breetzke (2010) describes wellbeing to be understood as physical, mental and spiritual aspects which join to determine happiness or wellbeing. While ‘health’ can be understood as various social, behavioural, cultural and emotional factors and encompasses issues of physical and mental health, education, diet and other behaviours. The World Health Organisation (1986) describes it to be a complete mental, physical and social state of wellbeing.

Relating this back to the built form Alexander (2002) expresses that the physical environment affects one’s life and the shape of a building affects one’s ability to love, one’s wellbeing and one’s behaviour. He goes on to say that he believes with the correct influence from the physical environment, with a component of a living structure, will promote and nourish an individual’s freedom of spirit. However, in the wrong environment, one that lacks a living structure, an individual’s freedom of spirit may become either weak or even destroyed. There is a relationship between architectural environments and how an individual’s wellbeing may be affected. Urban environments and architecture need to encourage social connectivity through social interaction and engagement.

3.2.2 Social Ecology Theory

Social ecology is described by Stokols (1996) as umbrella framework or guiding principles that contribute to the understanding of interrelations between people and communities, as well as the environmental factors that go along with human health and illness. Social Ecology theory is a shift from person based to environmental based and community oriented health promotion and wellbeing (Stokols, 1996). Recent concepts, such as those of Stokols, on social ecology have stressed the importance of linking health promotion with efforts to reinforce environmental supports that are conducive to personal and collective wellbeing within the broader community. This increased popularity is realised through a rising approval that the majority of public health challenges are far too intricate to comprehend satisfactorily without a more comprehensive approach, including elements like: cultural roots, psychological, organisational as well as issues like community planning (Stokols, 1996).

Much earlier research in the health field has culminated in the promotion of behavioural changes over those of environmental ones. One of the greatest challenges of our current cities is to uphold healthy environments, although due to local as well as global dilemmas, this feels somewhat unachievable at times. Weick (1984) suggests that a positive, albeit measured, influence can be achieved on the healthfulness and quality of the global environment through the adoption of incremental health promotion and environmental protection efforts within local communities. The majority of health promotion programs focus on individuals rather than on the environments that house them. Instead of gearing to promote improved wellbeing among occupants of a community, they have been planned around tackling dietary regimes and exercise, all health habits of the individual. Findings in this study however suggest that there is great potential value in interventions that tackle the built environment.

Stokols explains that earlier accounts of human ecology give more focus to the environmental aspects, whereas social ecology, the focus here, gives larger consideration to the collective or social, cultural and institutional situation of people-environment relations. Social ecology offers a theoretical framework for understanding the interplay among persons, groups and their socio-physical surroundings as well as a guideline for community health promotion and this is where this study focuses.

One can mull the potential ways in which social ecological thinking can be used as a guideline to develop measures for designing, implementing and considering community health and sustainability in the urban context. Social ecological theory comprises certain core ideologies, or concepts regarding the construction of efficient schemes, about human health, in order to encourage personal as well as collective wellbeing amongst members of a community. These principles are outlined below.

Firstly, characteristics of the physical and social environment (technology, architecture, geography, economics, culture and politics) are seen to influence the wellbeing of participants and therefore the healthfulness of a situation. Adding to this, the health of persons and groups is influenced by personal attributes such as genetics, psychological outlook and behaviour as well as environmental factors. Stokols (1987) explains that an understanding of the interaction among personal and environmental issues should be the basis of efforts to promote human wellbeing, rather than on study that highlights environmental factors.

Secondly, Environments are capable of being described as in terms of their social and physical workings, their actual or perceived qualities and their scale to individuals and communities. Stokols (1987) describes that milieus may also be described as to be made up of independent attributes (lighting, temperature, noise, space) or the relationships made up between elements. The multifaceted human environment should be the focus point of health and health promotion.

Thirdly, participants may be considered at several levels, from small groups to large populations, individuals to communities, just as environments are depicted by their complexity and scale. A multiple level analysis is integrated by the social-ecological concept to assess the healthfulness of a locale as well as the wellbeing of the groups or individuals within, rather than centring in on individuals.

Fourth, environment-people connections are characterised by sequences of mutual influence. Occupants' health is directly subjective to the social and physical characteristics of settings and concurrently, through individual and collective action, the healthfulness of settings or surroundings is modified by the participants within (Stokols, 1987).

In using these principles of social ecology theory one may realise several guidelines for community health and wellbeing. A few of these are expressed below:

- Examine links between wellbeing and the diverse socio-physical setting.
- Consider the influence both personal or environmental realms have on wellbeing.
- Develop healthy situations that enhance people-environment relationships.
- Deal with interdependencies between the physical and social environment.

3.2.3 Wellbeing and the Urban Context

How is the urban context and the built form addressing or manipulated by the social-ecological way of thinking?

A positive feeling is created for inhabitants if there are opportunities for sustainability. This can be achieved in high density cities by reducing car usage therefore increasing cities resource efficiency. An increase in cities resource efficiency allows for higher living densities without roads becoming overcrowded and mobility suffering. These cities often display mixed land uses with residence, employment and recreation within close proximity. Durban has a low density urban typology that is characterised by urban sprawl, similar to many rapidly urbanising cities around the world. This is a macro level issue that is often outside the realm of the architect, although architects are instrumental in introducing this into built form although is dependent on external variables such as zoning and presence of efficiently functioning public transport systems. Only a co-ordinated effort on the part of all involved would assist in overcoming urban sprawl.

A main goal of social sustainability is seen as reducing sub-urban sprawl. Reducing travel times and distances people have to commute to and from places of work, residence and social activities. This can be achieved at various scales, neighbourhood, city, or regional. Neighbourhood sustainability is also greatly affected by elements like street fabric, block size, street design, positioning and arrangement of parks as well as the availability and access to shops or civic facilities.

Breetzke (2010) discusses the effects of urban sprawl as leaving destinations further apart, leaving people commuting larger distances and for longer periods of time to and from places of work, residence and social activities. This has a secondary issue; of people favouring towards private modes of transport over public. The ramifications of this include pollution, congestion and ultimately time spent in vehicles instead of time with family or amongst a community being social. All of this bares a burden on people's physical and mental wellbeing as well as financial costs and stress, and interferes with the relationships that are so vital to social sustainability. It is a conscious choice on the part of an architect to choose to focus on urban design projects and buildings that bare positively and revitalise urban areas, bringing spaces of quality and a 'sense of place' back to built up areas. Bringing health back to drained urban areas through elements like interesting public spaces are all causes worthy of an architect's attention. Relating back to the main research topic, architects ought to aim for a design that truly serves the needs of the community and searching for a better state of social sustainability, while at the same time remaining economically and environmentally sustainable.

Norberg-Schulz (1980) explains that the environment influences human beings. This implies that architecture should transcend the early definition of solely creating spaces that are habitable and consciously produce greater goals. A basic relationship is formed between man and his/her environment; individuals are prone to identifying particularly with meaningful environments. Dwellings are not merely just shelters. Spaces where life occurs are rather 'places'. Jackson (1994) relates this to *genius loci*: The atmosphere of a place and the quality of its environment. The basis of Genius Loci is that an individual can relate and feel at peace when they can identify with the place that surrounds them. There is a psychological link to how an individual feels and interprets a space or place. The way in which an individual relates to a place influences the manner in which he/she will experience the place and how they would feel within it. Architecture has the ability to refine and define while being an environment for humans and thereby influencing human feeling and consciousness. Genius Loci relates only to an individual's emotions and feelings within a particular environment and therefore cannot be described in words or pin pointed. This theory emphasises the importance of being able to identify with a place and therefore become in sync or in tune with it. The challenges facing the relevant design for this research and architects further is to be sensitive to the genius loci that a place, thinking twice before implementing one's own ideas onto a place. One needs to have an appreciation and an understanding for the history of a

place, the ‘feel’ of a place and be sure to unite this with the various other constraints and opportunities of a site.

It is evident throughout history, the positive effects a public square can have on a town, its inhabitants and its social sustainability. They are identifiable elements that have the ability to create excitement and attraction while bringing people of varying backgrounds together.

A major loss to most modern cities is their public squares. A public square should be the heart of a city. Cities have grown rapidly and focus has been on economic development rather than the focus of social sustainability and the value of spaces that are designed as public areas. Modern buildings break the sense of scale between architecture and humans and this places emphasis on buildings and commercialism rather than human engagement. This is experienced in our own city, Durban, where several high-rise buildings tower over the remains of public squares.



Figure 3.2.3.1: The Piazza Di San Marco is an effective town square. The space is legible and holds a human scale. (www.google.com)

Many of these older cities retain the importance of public spaces and therefore retain the human scale interpretation of a space. Space is defined and enclosed by the buildings, yet both minor and major views are retained. Links and boundaries established. Spaces are clear and understandable, interlinked through a series of elements. By focusing on the local activities and habits of the people the square unifies guests from all areas. The square is a display of ornate understanding of the happenings and goings on of local life of the inhabitants. Modern cities neglect these fundamental issues, to their detriment, little relationship between spaces are established which results in isolated spaces which become underutilised due to their lack of depth in meaning. A square needs to be a focal point and allow the user a space to withdraw from the hustle of modern lifestyle in order to provide a humane experience.

Many city environments are not pleasant places to live and especially not to raise a family but people are drawn into cities because they offer high accessibility, convenience and opportunity. Research from van de Berg, Hartig & Staats (2007) reveals that stress may be reduced and restoration provided through contact with the natural environment over the harshness of concrete form. Ironically the movement from concrete cities into rural or suburban areas increases sprawl.

At a more contextual macro level green spaces are viewed as a move towards biodiversity. This research topic would focus more strictly on green spaces at a meso level, studying the

effects green spaces may have on a community or an individual. At the meso level green spaces offer visual relief from a concrete jungle, provide an inviting landscape to go for a walk, read a book or picnic with friends as well as promote healthier lifestyle options. Breetzke (2010) goes on to explain that these green spaces are even more crucial to poorer people as they ask for no admission fee and they are at times the only option for entertaining kids, promoting healthier lifestyles and opportunity for social interaction. The value of social networking in social capital is priceless, as will be discussed further on.

The initial concept to Central Park in New York City, Manhattan was to create a place where people could relax and meditate, a social experiment bringing a mix of classes together. This is a good example of the use of a visual break to the hard city surrounds, but more importantly how a green space can generate recreation, economic and social facilities within an urban context. The park creates relief and enjoyment for all inhabitants while creating an eco-friendly environment with the thousands of trees as well as lakes and water sources. It would have been impossible to foresee the success of such a project. Breetzke (2010) explains that green spaces are crucial to a human's wellbeing. As humans we react to the visual attractiveness immediately and the overall morale of a city is immediately heightened. Vision and foresight was had to implement Central Park into Manhattan and this is what is needed for the cities of the future. It is not impossible, yet very much harder to implement such urban design into an already developed city.



Figure 3.2.3.2: A view of Central Park in comparison to the concrete jungle that surrounds the park.

The oasis within the city. (www.google.com)

3.2.4 Conclusion

Individual and community wellbeing may well be the basis of social sustainability. In the local and present context where many more people are being forced into smaller spaces

within our cities, it is human wellbeing that has been given less thought. Financial calculations and profit margins win out when designing and planning in the modern city. Urban sprawl and social sustainability can be counteracted through intelligent architectural solutions that look beyond personal gain and begin considering the small concepts that affect people's lives positively on a daily basis.

Marginalised and forgotten communities struggle on in confined urban environments where the cities built environment has forgotten about the humans that live within. Architecture needs to once again put the people using and surrounding it at the forefront of its thought pattern.

3.3 CIVIL SOCIETY

3.3.1 Introduction

When one breaks down community cohesion it is not the individuals alone but the individuals that make up the whole that comes of paramount importance, it is civil society. Civil society is of paramount importance to both democracy and sustainability because it is the foundation on which democratic governance rests and without which, democracy cannot survive. Civil society has demonstrated its strength by toppling governments around the world, not least so South Africa. Civil society can be used to indicate and understand the important matters of social life. It will here be used to describe and explain the endeavours of people engaged to promote the public good and ultimately community cohesion and 'togetherness'.

In modern cities and present times, civil society finds itself galvanised by issues surrounding the alarm of globalisation, the demands for equity in social and economic opportunities, governance that is democratic and divided markets. Civil society, democracy and sustainability are interrelated and complementary and can therefore not be detached from the other three primary constituents of social sustainability (Dillard, Dujon & King, 2009). Civil society creates public space and facilitates deliberation among people via networking, media and communication. As a public space, civil society is a realm of autonomous and free social life wherein people are sovereign.

Civil society has multiple manifestations, it is a “social movement aligned by peoples common struggle against neoliberalism”. It is an architect “enabling political action” and “consciously developing its political space”. It is an “emergent social order from which rise all forms of human agency that actively engage in social and political advocacy” (Dillard, Dujon & King, 2009: p.99).

Democratic civil society has the ability to affect architecture and contribute to the development of social sustainability through various theories and concepts, as shall be described below.

3.3.2 Social Capital Theory

The concept of social capital is expressed as involvement of an individual in his/her community and the extent that they know and trust the people around them and the many social interactions happening between them (Bourdieu, 1985). Bourdieu writes that social capital can be upheld through community engagement, volunteerism, informal sociability and social trust. The primary contemporary investigation of social capital was done by Pierre Bourdieu, who went on to describe the concept as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition” (Bourdieu, 1985: p.248). Among those that tackled the topic, Pierre Bourdieu’s is quite possibly the most refined. Bourdieu’s treatment of social capital is influential as he focuses the intentional production of sociability for the intention of creating this resource. He spotlights the positives that one walks away with from the act of participation and interaction in groups. Together with this, a review of further literature by Glen Loury (1977), culminates in the possibility to identify three functions or outcomes of social capital relevant in any context: (a) a basis for social control; (b) a family support structure; (c) a foundation for beneficial family support.

Briggs (1997) goes on to demonstrate that social capital works on many levels and has a vast role as a resource for action. These levels include city, neighbourhood, family and individual, and is used by the individual for at least two purposes:

- Social support – or to get by. Used to be able to cope with the problems and difficulties of day to day life. When we discuss problems with a friend or spend time listening to somebody else's issues, social capital is at work and is directly effecting the troubled individual as well as building for later use.
- Social leverage – or to get ahead. Used in order to positively affect ones opportunities or life circumstances. At times the saying 'it's not what you know, it's who you know' proves itself true, and when one is socially connected, ones opportunities for change are effected and improved.

Social capital tends to work towards social or 'collective good'. Robert Putnam brought this to centre stage in describing a positive collective aspect. When a system or situation runs or operates better due to the connectedness of the individuals that make it up, this is the positive collective aspect. Putnam goes on to bring to the forefront that although the majority have improved economic situations their sense of community has withered. The traditional cities of old have given way to the modern 'edge cities' and 'exurbs' which are vast distilled places where people go to sleep and work and very little else. People find themselves more often alone, spending more time at work, commuting long distances and watching television which leaves less time for community participation, gathering and socialising with friends, family and the people around themselves.

If an area has a comprehensive economic system that works well, as well as a strong level of political integration this is said to be due to the regions thriving amassing of social capital (Putnam, 1993) and this is central to Putnam's thesis.

Constructed through the 1970's and early 1980's is Pierre Bourdieu's older concept of social capital and is linked together with his theoretical ideas on class. Within this Bourdieu recognises three concepts of capital, each having its individual relationship to class: cultural, economic and social capital. Importance is placed on social dealings that enhance the possibilities of an individual to progress his/her interests, thus Bourdieu's perspective on social capital is that it is used as a resource that acts in the day to day struggles of one's social life.

There are two factors which in turn make trust. Firstly, voluntary regulation between people that are foreign to each other; and secondly, generalised trust generates the foundations for

social networks and associations towards the short term welfare of a group. With these two constructs in place, the circle is set up: the more social capital put into the circle, the more the circle works and grows. "Trust creates reciprocity and voluntary associations; reciprocity and associations strengthen and produce trust" (Putnam 1993: p.163-185). Social capital is cumulative by character and self-reinforcing. Contravening the norms of reciprocity, distrust, isolation, shunning ones obligations and disorder and stagnation results in the enlargement of a 'non-civic community'. Opposite to this, a virtuous circle rather, is upheld through high levels of co-operation, strong reciprocity, expanding trust, civic activity and collective wellbeing resulting in social equilibrium (Putnam, 1993). A custom of citizen participation, mutual co-operation, equal political relations and vital social networks is created within areas where you might find well executed governmental structures and a flourishing economy. From this all, the accumulation of all these attributes exudes the idea of trust between the actors (Putnam, 1993).

Social integration and collective values are dealt with within the works of Robert Putnam, whereas Bourdieu approaches the concept from the viewpoint of actors engaged in great effort and search of their interests.

Bourdieu defines social capital as having two components:

Firstly, mutual cognition and recognition is the basis and characteristic of social capital. Secondly, rather than being a product of the quality of a group, it is a feature formed by the quality of the relationships between the people involved (Bourdieu, 1980) and is therefore synonymous with social networks and participation in groups. Social capital, is for Bourdieu, utilised by an actor to improve one's social position and therefore it is a collective phenomenon even though it is looked at in terms of individuals and communities exploiting its potential. "The volume of social capital possessed by a given agent....depends on the size of the network of connections that he can effectively mobilise" (Bourdieu, 1986: p.249). It is ultimately seen as a resource connected with social networks and group membership.

3.3.3 Civil Society and the Urban Context

So how may this affect architecture and the built form, and in turn, how may architecture effect civil society and social capital?

Architecture can have effects on building trust-based relationships between individuals, and thus can stimulate the appearance of social capital (Dascălu, 2013). Civil society is the primary tool that architecture may use in producing social capital in our cities. Civil society refers to groupings of persons who come together to assist in contributing to positive change within the community possibly through actions not part of government or other formal political systems. This concept is central to the debates about social capital. Putnam expresses social capital as manifesting from a strong civil society. Participation is the backbone of civil society and finds itself under threat when societies become excluded. Social capital is brought about by community cohesion and social capital, in turn, is a strong element of what makes up civil society. Thus, one must explore the concepts of civil society in order to truly realise the positive attributes of social capital and the effects this may have.

Bringing the actors together

Active connections have positive benefits on the actor, from belonging and attachment to knowledge and information to neighbourhood engagement, informal childcare to neighbours helping each other out to improved circumstance. A lecturer in Public Policy at Harvard University and a senior Social Scientist, Woolcock, remarked, “the well connected are more likely to be hired, housed, healthy and happy.”

There are various practical ways to bring the people of new or ‘disconnected’ cities together and allowing people to interact.

When describing the city of Naples’ culture and form, Walter Benjamin, in his book ‘One Way Street’ (1924), illustrates the idea of architecture and its city activated and animated by the goings on and happenings of its occupants and of space without culture and people being lifeless. He goes on to describe occupation invited by the frenetic activity and colour made possible through permeable spatiality. When describing the difficult mutual relationships that exist between individuals and the spaces they interact with, between a community and its architecture he gives an indication of the complexity and fragility of this. He goes on to signify that streets are of the utmost importance and illustrates this by suggesting that streets and interactive civic spaces should be designed first and domestic layouts can follow (Benjamin, 1924).

Streets are a clever and essential way to activate and define the public realm, they work. Streets are essential in the makings and defining of the social lives and practices of cities. Figure 3.2.3.1 illustrates a flourishing street in Brighton with qualities that can be learnt from and used to elaborate architecture, described below:



Figure 3.3.3.1: The Laine, Brighton. (www.peterbarberarchitects.com)

At a larger scale The Laine provides linkages. The Laine forms part of a greater network that assist in making a permeable city and aids in providing a simple way of moving across the city or linking to various typologies and uses. While achieving this The Laine continues to offer strong spatial and visual connections between the surrounding, culturally varied neighbourhoods. Therefore this lane becomes well incorporated into the spatial fabric of its surrounding city. It may not always be possible to achieve this, depending on location and

geography, but providing the link means the street in question may become a necessary link at a more macro scale. What The Laine does well is it assists in concentrating the public gathering spaces and social life of the city into a reduced and limited space. In other words it contributes to bringing groups of people into close proximity, people that are diverse in economic, social and cultural backgrounds, and allows for the potential growth of a vibrant and exuberant social vista.

The built form that line the streets are as important as the streets themselves. These buildings house a diverse range of uses, residential, business, retail and leisure, providing a twenty-four hour a day occupancy allowing for social gatherings on a more regular basis.

A strong visual relationship between the bounding built form and the streets manifests in as much as possible public spaces being overlooked, surveillance or naturally policed. Narrow frontages activated furthermore by numerous access points or front doors into buildings generate visual diversity and it would be hard to imagine, under those circumstances, a robbery taking place. This provides a comfortable and welcoming public scene.

From this combination of varied uses comes a rich, diverse local culture and one can see the importance of The Laine, or street, and its relationship to the bounding architecture.



*Figure 3.3.3.2: Haggerston and Kingsland masterplan, by Peter Barber Architects.
(www.peterbarberarchitects.com)*

The Haggerston and Kingsland masterplan, by Peter Barber Architects (figure 3.3.3.2), is a demonstration that it is not only the streets, but the spaces, places and links surrounding, that then become essential and activated. The Haggerston and Kingsland masterplan is the design of a new, dense, street supported city precinct and represents all that civic society and social

capital encompasses. The design aims at encouraging community cohesion through thriving, busy, colourful public space and is therefore a celebration of the colourful social scene.

As described, the design is located and continues to add to a tight network of interconnected streets, achieving a direct and versatile arrangement of linkages across the precinct, allowing for strong spatial and visual connections with the surrounding communities. A one mile long linear park which runs from south to north, as the heart of the design, connects several pre-existing public gardens and social spaces, reconnecting, up till now highly segregated roads. The park provides spaces for people to gather and activities to promote congregation. Laden with benches, trees and public notice boards, is a small public square adjacent to the existing community hall, allowing citizens to meet and chance encounters to take place. This allows for activities to spill out from the community hall and engage the public and provides the square with a local feel, beginning the creations of a shared identity and a local culture, which shall be explored later. This local culture and identity is retained by the geometry of several of the streets, where they are introverted in nature, suggestive of the fact that they belong to the local residents.

In order to facilitate a twenty-four hour occupancy a mixture of uses including varied housing, business, retail and community and leisure buildings is envisaged. Residential typologies go on to use a terrace arrangement and are accessed directly off the street at regular intervals, activating and securing the street edge. These terraces are orientated so that public spaces remain overlooked. In addition to this, each dwelling is designed to encompass a balcony, garden, roof garden or courtyard of some sort. The building typologies are reactive to the streets on which they are found- a taller typology in the busier perimeter locations and a more intimate typology in the narrower streets.

The concepts here portray a street based urban precinct designed in such a way as to encourage energetic and activated public space which is mediated through the defining edges of the architecture that surrounds it. Spaces are provided for gathering, the gathering is activated, surveillance is provided and people are brought together through the natural human tendency to be social and the means that the architecture provides.

Great public spaces

Civic spaces, when they work well, become an extension of the community. These spaces become an arena for public life if they are guided to function in their proper civic role. They

can become spaces for communities to come together, for economic and social interactions to take place, where festivities take place and where people get to know and trust their neighbours. Courthouses, community centres, post offices and libraries can become the ‘front porches’ of the community, where interaction may take place, with government and each other. A thriving civic realm may leave residents feeling a strong sense of community and well connected, alternatively, individuals are left secluded and alone when such spaces are lacking. A great public or civic space is to be valued in a city as they create their own special feeling and identity and therefore relates to and nurtures the surrounding community and brings the public together.

Transforming a civic environment into a great public space has huge rewards that extends beyond just the space. The place itself enhances the situations of the users and adds value to its surroundings. Culturally, economically, socially and environmentally, great public spaces contribute all round to community health. They do this by adding enrichment to the civic realm in providing an identity, individual feel, unique sense of character and a stage for public activity. Great public spaces, by becoming focal points for their communities’ identity and beginning points for positive growth, can and must become anchors for communities.

All of the described assets provide the foundations for greater community liveability. Great public or civic spaces play benefit to all types of communities, from small rural gatherings to dense urban precincts and from communities with a singular ethnic background to ones that are diverse in nature.



Figure 3.3.3.3: Great public space could be anywhere. (Woodcraft et al. 2012)

The importance of place

Statements have been made using world renowned architects, designing iconic architecture, about the importance of civic buildings, above all libraries and museums. Very few in comparison however have attempted using the powers of architecture to instil or create place. Let us rather envision the ground floor of museums for instance being the ‘town square’ where community gathers for numerous reasons and where ideas may be discussed and relationships made. Civic buildings can be transformed into vital community anchors through moving rather towards an architecture of place and in doing this strengthening the ideologies of civil society, community cohesion and social capital. The norm unfortunately is to rather design buildings with minimal to no ground floor uses. Blank walls or reflective glass around the perimeters of buildings is the preferred norm. Activating uses on ground floor such as shops, restaurants etc. pulls the attention of the walker by and aid in serving the surrounding community in that they help to maintain the surroundings and street life in the local area.

Place making around these community anchors is one way that we can go about rebuilding and re-establishing city centres and urban precincts. If one can achieve this, civic institutions and public spaces can regain the ascendancy in being effervescent destinations and catalysts for rejuvenating the neighbourhoods in which they are placed. Without these grand public

spaces we would not have great cities, as we can see by examples like the public spaces that surround Rockefeller Centre in New York City, a hugely visited public area. Many thousands of people use the city's public spaces to gather events like the lighting of the holiday tree or to possibly be seen on television while standing in the streets outside popular television show studios. As spaces like this characterise New York, Paris has the Eiffel Tower. Community or public spaces are equally important to the identity of cities as the famous icons are. They are the spaces in which the local community experience the people that surround them, their neighbourhoods and each other.

Public or civic spaces offer forums for people to encounter the joys that surround them, art, performance etc. and allow one to participate in cultural activities otherwise inaccessible. A great variety of gathering personal sets the stage for positive social interaction and goes on to enhance a cities cultural life.

By instilling an identity and shared pride within the community, this leads to an enthusiasm and ownership for the public spaces, civic wellbeing and togetherness which all produce a strong civil society. These 'places' are predominantly structured or guided by architecture or at least the built form. Thus, through social capital, architecture can contribute positively to social sustainability and community health.

3.3.4 Conclusion

Civil society is what makes up our cities. Human beings are what architecture is based around, and it should stay this way. The earlier cities showed this well and therefore worked well. Modern cities have somewhat forgotten the importance of unifying and bring a community together. Bringing the actors back together should be a primary goal. The importance of public spaces in order to bring the community together is invaluable. The idea of 'sense of place' or 'genius loci' is lost in Durban. In order for social sustainability to be addressed, the relationship between the community and the architecture that houses it needs to be rekindled.

3.4 EQUALITY AND GOVERNANCE

3.4.1 Introduction

A community is both made up equally of the people who live within it and the places where they live; however, a city/community is as much about the social going ons as it is about the physical. Citizen participation is hugely important in creating sustainable communities as it relies on the active engagement of the people.

Because of the nature of what development really is, “unless there is meaningful and effective participation, there is no development” (Bopp and Bopp, 2006: p.85). With an understanding of participation as defined by Bopp and Bopp, it becomes a term imbued with community empowerment rather than with community need and concession. Adopting this view, participation becomes a theory mechanism in which local communities and outsiders come together, as participants, to achieve community defined goals. Participation is best described as the active engagement of the hearts, minds and energy of people in the process of their own healing and improvement.

White (1981) describes that empowerment is developed through the involvement in areas like evaluating, planning, deciding and thinking. Can this empowerment close the gap in inequality and provide a platform for democratic governance?

3.4.2 Participation Theory

The concept of participation is not new (Buchy, Ross & Proctor. 2000). Extensive academic attention has been given to the theory of community participation since the 1960's, but predominantly since the 1990's. Storey (1999) describes that the concept moves towards locally sensitive approaches rather than aspatial, top-down advancements that have been common for many years. As for any theory, there are varying ideas to its origins, Buchy, Ross et al (2000) explain that the theory was founded within two areas: development and political sciences theories. Adding to this was Lane (1995), suggesting that participation theory was influenced by development theory and is by nature highly varied and complex. Arnstein (1969) however, did probably the most decisive work on the concept. Arnsteins views were particularly important in that he felt there are varying levels of participation,

from consultation to manipulation through to what we may now think of participation, i.e. partnership and citizen control and its varying levels.

Since Arnstein's initial works however, the concepts theories have moved on and new expressions added. Importantly to this study, there has been a definite shift in the concept to understanding this theory in terms of the empowerment it may possibly create on individuals and communities. This shift stems from the idea as the citizen as the consumer, where choice is power. Within this, individuals are now accepted to be responsible for themselves and therefore should be active in public decision making. Within different frameworks and situations are found varying levels of participation.

One sees the importance of participation if one recognises that the poor, worldwide, have suffered as a result of development. Within development everyone needs to be involved, within decision making and benefits. As the theory of participation grows and develops, the faults in traditional or 'older' techniques are spotlighted. Participation needs to move towards people centred development and participation theory encompasses this.

There are people that still believe participation has no benefits; however the literature shows the importance. Chamala (1995) identified the benefit of efficiency. He describes that engaging the effected individuals at all levels makes for solving issues a far simplified process. Participation in projects, enhances their effectiveness through ownership, aiding in decision making.

White (1981) brought forward several benefits to community participation. White describes that through participation more will and can be accomplished and the rollout process will be eased. He goes on to identify that the process of participation has deep rooted value for the participants. Participations becomes a catalyst for further or future development, instils accountability, certifies a need is being met, makes certain development is done in the correct manner and spirit, highlights indigenous knowledge and makes people of the community more aware of the issues that surround them and how they might be able to positively effect them.

Developments that consider the contexts they find themselves within will more likely be effective in their execution as they involve the local community. At the same time they will

be successful in taking the uniqueness of neighbouring social structure, economy, environmental, and culture into account. Storey (1999) describes that communities that are able to effect developments in their locality are far more willing to be passionate about their carrying out.

There exist two main strategies – top-down programs or bottom-up projects. These two examples are of opposite spectrums and they sum up if developments are run through developers / governments or the communities that are affected.

3.4.3 Equality, Governance and the Urban Context

Community participation, in this study, is focused on bringing about two main qualities within an urban environment, equality and democratic governance. Each of these qualities feeds off the other and in turn makes each other stronger. Empowerment, as described within participation, is the concept that can realise this.

The exploration of social sustainability continues here in that it explores potential in the concepts of engaging and committing the local community in generating and upholding cities and communities that are sustainable. The study explores this in looking at concepts of creating ownership within the city and its communities while supporting the idea of socially sustainable communities through empowerment, equity and democratic governance.

Governance and supports

South Africa is fortunate in that the local government model offers space to the everyday person and allows them to become keenly involved within governance. In fact the constructs of a South African municipality is so, that it should encompass not only the regular administration and councillors but also include the local community as well. Each of these constructs has rights and duties.

Developing a custom of municipal governance that complements formal government through the concepts of participatory governance is, according to South African law, a must. A municipal council or managing organisation should build mechanisms to seek advice from the community and community organisations and should review its processes for involving

the community. A developer or architectural team should communicate to the public, in order to promote and assist in community participation, information concerning the mechanisms, processes and procedures through meetings that are open to the community, unless in exceptional circumstances.

South Africa is lucky to have a leading policy on participation in governance structures in the world. This allows for an added flexibility within governance and development that allows the importance of local circumstance and accounts for the various situations found in each community context. Bringing this through into everyday policy and practice allows for government and developers to achieve a greater understanding of the social needs and problems found in each area. This ultimately contributes to the consideration in design of necessary social supports and services that are deemed empowering and enabling.

Although it is hard to directly indicate the changes effected onto architecture by participatory democratic governance, indirectly there are many circumstances that are generated through these participatory methods that go on to play a vital part in social sustainability. Democratic governance becomes a stepping stone for this.

Community planning and consultation

Blundell-Jones (2005: p.13) states that “architecture has become too important to be left to architects” and goes on to illustrate that it is seen as essential to build new qualities within architecture and new behaviour patterns in its generation. In order for building and using to become two parts of the same whole, all traditional and existing fences between users and the developers ought to be eradicated. Therefore, architecture and the user are merged to produce a situation of equality where each, with varying impacts, is the architect, and every architectural event, is considered architecture regardless of its origins or implementation.



Figure 3.4.3.1: Voice and influence. (Eagan, 2004)

In order for community acceptance and engagement to be definitive local communities must be implicated in the decisions that affect their lives through all the stages of development. If the local community is left out or excluded from having their input, the benefits of the short term may culminate in long term burdens. Within every development there are effected individuals to some extent or degree and it is this community that has to bear the brunt of the development in the long run.

Arkwright Towns relocation was the focus of Gerda Speller's research for six years (a 100 year old mining village in Derbyshire, England). The concepts included moving all the villages into housing a short while away owing to a nearby coal mine that was releasing methane gas. Through this study Speller identified certain conditions that must be in place in order for people to form an attachment with their neighbourhoods, and foremost, Speller says, is the need for residents to be allowed the opportunity to voice their say in the moulding of their community.

A study of Mumbai India could deliver similar outcomes when considering its social sustainability methodologies. Research has proven that community led relocation processes have been hugely more successful in comparison to traditional government led relocation processes. Community led process, in this case the relocation of pavement dwellers through a participatory process, allow individuals to have a say in site selection, architectural design and governance structure and consider the how recently relocated communities might settle in and thrive.

Looking local we find spaces like Long Street in Cape Town. In this we find cannot find a homogeneous community that can say exactly what they want, rather we find people of varying backgrounds and conflicting hopes and expectations. So when it comes to planning the future of this space, the design question cannot be how do we make it pedestrian friendly? But rather what is the potential for this space in the greater context of Cape Town. How will the development of this street ensure not that every resident, business, street trader, club patron, taxi driver, drug dealer and prostitute is accommodated but rather that the desirable activities find themselves naturally evolving and contributing to a safe, welcoming and great street. More importantly than the stories it is famous for, Long Street is a place where government buildings, restaurants and, most importantly, people are fused together within the urban fabric, and this is through participatory methods that can continue to steer it into the future.

In this example we need to ask about the relationship between the street and its users and how the street might make them feel when they are there, however this may be directly related back to architecture. Here, the street becomes nothing if its potential users are not attracted to it; in architecture this is similarly true. The human element is essential to create positively effecting architecture. While it may be important to consider the makeup of our architecture as part of a conversation regarding its future, it is necessary that this continues to become part of a broader conversation that re-thinks the role of architecture and what the potential is for it to improve and contribute to a better life for citizens across our cities. So relating this to our streets, or Long Street in this case, considering options for its future and then executing enhancement, the process must be used as an entry point for a conversation that may focus on the broader role of the design of our streets in improving lives of its users.

Future Cape Town (a platform for the re-imagination of the city by its citizens) believes in order to engage the public; a noteworthy investment in innovation is needed, in order for the process to become a legacy for involving individuals in defining the future of their cities. The organisation believes that encouraging input from the community and processing this into ideas for our architecture and our cities can contribute to formulating the design questions and answers we need to create socially sustainable architecture. Open Streets Cape Town (an establishment promoting a culture of civic involvement) has begun taking this to the streets to see how people react to these conditions across the city.

Inventive thinking is crucial for overcoming apparent differences and turning them into opportunities. Community participation can be the vehicle for growing the range of possibilities, but not necessarily if we just stick to the standard process of asking peoples involved what they might think of a scheme. The innovation rather, is needed within the process itself and not only the design. This can be realised through the concept of ‘placemaking’ by creating a custom of community engagement.

Held in a local community centre in Cape Town, the Open Streets Cape Town organisation held discussions with the locals about what they might consider for the streets of their city. The community became galvanised around the idea of Open Streets, a network of Open streets taking ownership of Cape Town with the idea of generating more and better public spaces for the people of the city to interact. The discussions with the community can now confirm a skateboarding park, bicycle activities and ‘activation points’ that include a family

‘corner’ where activation occurs for all members of the family. Similarly architecture can learn from participatory techniques like this and drive ‘placemaking’ to the top of any design brief.

Social practices

“A growing body of research supports the assertion that community and neighbourhood empowerment- giving residents the opportunity to take part in collective activities that influence the areas they live in- contribute to the wellbeing of residents and communities” (Woodcraft et al. 2012: p.39).

Woodcraft et al. (2012) depicts that wellbeing is heightened under certain conditions. Wellbeing he says is firstly higher where locals have the ability to have a say in their surroundings. Secondly wellbeing is said to be elevated in persons that have contact and relationships with their neighbours and thirdly it is advanced in locations where the residing residence has the belief that they may affect control over local circumstances. Wellbeing is directly affected by and profits from empowerment that allows individuals to affect their context, makes possible and uplifts community engagement and makes the community feel they have the power to make a difference.

Woodcraft et al (2012) portrays however it is just as important to consider how these concepts may be instilled and made sustainable into the future. “A strong community organisation can be very effective in influencing local services, encouraging community initiatives and giving people a voice in dealing with the whole range of issues that impact on a community’s everyday existence” (Woodcraft et al. 2012: p.40). This shall be explored in the case of Medellin, Columbia, below:

In the past twenty years Medellin has achieved a lot in that it has transformed through a difficult past and has turned itself around to become a well integrated, safer and more accessible place to live than it has ever been. It once was a no-go city for tourists, Colombians and businesses alike yet today Medellin is a thriving city with good infrastructure that is efficient, clean and integrated. The city’s public spaces have a great deal to do with this and contribute to upliftment due to the fact that they have become well used. Citizens now thrive off greater access and connectivity to neighbouring communities, public

facilities, libraries, schools and educational facilities through integrated transit routes. This is all thanks to Medellin's city urban renewal programme. Many public spaces in Medellin are now functional spaces and facilitate in the upliftment of the neighbourhoods in which they are found. The key ingredient is that these spaces have been designed with users in mind and are therefore well used and maintained. The concept of collective ownership is what is here used to achieve this. Citizens therefore have the mindset that these are our spaces and we use them and we take care of them. This is because of the connected nature of the citizens to their city and therefore become proud of their city.

Due to these concepts the urban renewal of Medellin has ignited a shift in those who live in and visit the city and this is that they are taking a far keener interest in the city than before. The city now emanates a powerful feeling of collective ownership.

So how was this achieved? How did Medellin turn itself into the city it is today? What procedures are in place to upgrade the city's shared public spaces? The two key elements in transforming a once violent city into a thriving metropolis are inclusivity and innovation



Figure 3.4.3.2: Medellin's well used public spaces were designed through community participation. (Eagan, 2004)

The view that new or upgraded infrastructure is to be designed in the bounds of a vision shared and supported by all the necessary people is the central key theme to Medellin's urban renewal programme and this is what is the foundation used to build better social cohesion and inclusivity. For the urban renewal programme to be successful it was seen as nonnegotiable that the process needed to be inclusive and it had to go on to connect all stakeholders around a common social development. This was achieved in several ways. People that were previously excluded from participating in their own city were seen as vital in the programme's success and central to its ideals- generally those living in the less connected or poorer areas.

These poorer areas, which are typically located on the peripheries and outside of the central business district (CBD), were far from the city's transport system and had high levels of crime and climbing. The people of these kinds of areas face high barriers to participating both economically and socially in and around their city and the result of this is that they take little to no ownership in improving the cities they live in.

It is this expansion and continued neglect of our city's worse off areas that must be avoided wherever possible and instead the frame of mind should be that these areas need to be tackled seriously in order for their residents to become actively involved and enjoy the positive concepts of urban city living.

In order for this to be successful and ownership to be taken, all stakeholders involved including government, community members, local specialists and civil society needed to be in support. During all stages of such programmes a comprehensive procedure of co-ordination, consultation and communication between all must be followed. This ensures that all stakeholders understand and have definition of the roles they potentially have in creating more socially sustainable communities.

To demonstrate and reiterate the possible valuable roles that citizens and civil society may have in progressing their neighbourhoods it is necessary that habitual community engagement is to be had in order to determine and understand what sort of communities we are wanting to build. This is ideally done before designs are progressed as well as throughout the development and implementation process while opportunity for input from local architects should also be welcome where a design team may not be of local decent.

In furthering this social sustainability may be advanced by the processes of architecture- local labour may be used wherever possible, skills development is possible which improves individuals' employability and all this adds up to furthering the inclusive nature of such a programme.

Through realities like Medellin it is seen the possibilities of communities and mediating structures coming together to create cities that go a long way further as to provide the backbone for socially sustainable contexts and the positive influences this has on economic and environmental sustainability simultaneously.

Communications

Community participation has become somewhat boxed to include community voice in development strategies and therefore limits itself in the effects it may reach. Why not take it

a step further? Why not use the era of social media and seamless communication to further the horizon.

For instance, the city of Bristol, in its search for a greener future is determined on including a potent communications strategy involving local companies as well as residents in the development of the city. Bristol, commonly referred to as a pioneer in the field of social media and internet communications, has widely used these techniques for the purpose of interacting and communicating with its residents. In the past the city has used live lab conferences via interactive websites and social media to further involve all the residents of the city in decision making and actively be engaged in the cities development.

Future Bristol is one of these websites and it is used to promote the city's residents to get involved in for example voting for or against potential projects that may be going on within the city. This is used to give a clear indication of what is wanted by the residents of the cities one may be looking to develop.

This may be 'high tech' when considering the contexts of most struggling South African cities but the similar ideas could benefit by using similar thought patterns.

3.5 CONCLUSION

Planners, designers, architects, urban designers and all stakeholders involved should be urged to engage enthusiastically with the affected communities within the planning or urban and rural areas at no matter what scale. Participation should be at the heart of strategy development and plan making and should be seen as an inseparable element of the development of socially sustainable cities. Through the governance of these types of practices and the equity and empowerment they bring forward cities can move onwards positively.

CHAPTER 4

PRECEDENT STUDIES

4.1 INTRODUCTION

The following analysis will explore how, through social sustainability, one can create positive architectural environments. The analysis will be based on the following criteria:

- Concept (if any) and general layout
- Wellbeing
- Civil society
- Equity and governance

These four points were examined and an analysis formed. In doing so the author was able to gain knowledge on how positive architectural environments are capable of having a positive effect on social sustainability.

4.2 REDEFINING CIVIC ARCHITECTURE

Imagin On Children's Library

4.2.1 Introduction

Project: ImaginOn Childrens Library and Theatre

Architect: Holzman Moss Architecture

Context: Charlotte, North Carolina

Construction: Completed 2005

The times of 'information superhighway' are a great danger to our libraries and threaten to make them less applicable, even obsolete. As a public institution, libraries are probably the most enduring as they are repositories of culture, language and history. Centres like ImaginOn are retaliating to become as prominent as ever through a furthered schedule of accommodation and innovation as they fight to make themselves more applicable and broaden their possibilities well beyond merely the storage of knowledge.

Google has scanned and stored most of the books ever written now, and for the new age libraries like ImaginOn to distinguish themselves they need to take advantage of a single fact-

they are more often than not located at the heart of communities- and their furthering prosperity is owed to their role as public places and destinations.

While many cities have begun to realise this and have positioned their libraries as destinations, this alone does not automatically guarantee success. These destinations need to become truly great community spaces. They, and other community spaces for that matter, will find themselves failing or thriving depending on how well they can serve the needs of the communities that they serve.



Figure 4.2.1.1: Architecture speaks of human engagement. (www.charlottecentercity.org)

4.2.2 Analysis

ImaginOn is an example of these qualities as it embodies a further reaching and compelling vision of what it takes to be a great public place. It may fly under the radar as an architectural landmark, but garners respect in other ways. The library is taking on a larger civic role— balancing its traditional needs and operations with concepts of community sustainability- and in this creating a forum to the benefit of the surrounding public. If the library of days gone past was viewed as was the inward-focused community “reading room,” ImaginOn and similar new ones act more as a community “front porch” (Project for Public Spaces, n.d).

ImaginOn is a proven example of how the ‘front porch’ ‘inside/outside’ concept is redefining the community library. ImaginOn has a dedication to bringing new people into the library and furthering the libraries role within the context of our modern cities through forming partnerships and formulating an innovative program. In order to reach these goals the concept of, in order to draw people in, first you have to reach out, is used.

Social cohesion

If social capital is the degree to which one knows and can trust their neighbour then social capital is upheld through this design in that it celebrates community engagement, volunteerism and endows social trust. Due to the inviting nature of the design, such as the direct relation it has with the street, it invites occupation and concentrates public social life, bringing people of diverse social, economic and cultural groups into close proximity. The relationship between street and library means a strong visual connection is maintained, leaving public spaces overlooked and naturally policed.



Figure 4.2.2.1: Invites occupation and concentrates public social life.
(www.charlottecentercity.org)

Diverse program

The ImaginOn children's library and theatre illustrates the vital role that civil society and civic partnerships can forge in escalating the impact of a community based space like this. ImaginOn was born out of the joint efforts of the Children's Theatre and the Public Library, where together they contribute towards a tightly integrated mix of program and each therefore has a presence within the building. The Children's Theatre and the Public Library come together to formulate a shared structure and mission, they produce a vital energy of activity and an extended activities program allowing the centre to have further reach into the community and allowing for social gatherings on a more regular basis. Proving here that, although at a smaller scale in this instance, mixed land use reduces urban sprawl which bodes well for travel times and distances. This vital mix of program is the key contributor to events one might not usually associate with libraries. Following the 'front porch' concept the library generates events that spill out into the community such as 'Wordplay Saturday'. Wordplay Saturday is an event that fills the streets outside the library with members of the community.

With performances within and activities outside the event turns Charlotte into a festival of the community and its kids, and importantly the architecture allows for this and contributes in moulding these types of happenings.

The architectural facades of the library remain translucent and unobstructed to the street edge, making the interplay between the inner workings of the facility and the surrounding community unproblematic. The community is unified through the way the architecture focuses on the local activities and habits of the people. The architecture understands local life.



Figure 4.2.2.2: Theatres at each end linked through library. (blog.southeastpsych.com)

ImaginOn contributes to neighbourhood sustainability in that it addresses elements like street fabric, street design and arrangement of parks. Human engagement and scale are valuable design theories and due to this a 'sense of place' is realised and the communities' individuals identify with these meaningful environments.

The project is the result of unity through diversity. Programs that were once associated with two distinct cultural organisations now reside in one comprehensive structure. The theatres are at opposite ends of the building, but are connected through the library spaces. By housing both youth-oriented organisations under one roof, they have created an opportunity to engage children from different backgrounds, allowing them to meet and interact.

The importance of place

The ‘Wordplay Saturday’ event is one way that ImaginOn, together with several other surrounding community based buildings and organisations, has been hugely influential in the forging of a lively, actively involved and walkable cultural heart in the city. Due to the libraries urban context and placement within and around several other community or civic institutions, the urban fabric at large becomes positively affected. As the precinct has a civic nature, walkability and community engagement become stimulated and addressed. Individuals feel it safer to take to the streets and interact within their community as the streets and public spaces are actively engaged in the wellbeing of the community.

ImaginOn is a civic building that through its architecture, and not its iconic importance, is making a statement of its valued importance. The architectural expression of ImaginOn adds to a sense of place. The ground floor of the library follows a conceptual idea as acting as the ‘town square’ where people of the community can come together for whatever reason and allow for discussions and engagements to take place. The norms of institutional architecture are done away with and the design the facilities accommodation and program attracts people passing by and contributes to serving and adding value to the surrounding context and its social scene. The architecture of ImaginOn was designed in such a way to create architecture of place that has the potential to become a key anchor in its community.

As a community anchor

The concept of placemaking around civic institutions and anchors such as ImaginOn is of high importance and is seen here as a way to reinvigorate the city. The civic institutions and public spaces around it are seen to become effervescent destinations that can become catalysts for revitalising the neighbourhood around it. Through providing resources, gathering spaces and communication forums, community anchors such as ImaginOn can bring communities together both physically and symbolically. The spaces in and around the library become a social focal point, allowing users to gather. The design lends itself to a thriving civic space, a setting where festivities are promoted, where economic social and exchange takes place naturally, where cultures mix, and therefore a strong sense of community.

4.3 COMMUNITY COHESION

Kelvin Grove Urban Village

4.3.1 Introduction

Project: Kelvin Grove Urban Villages

Architect: HASSEL

Context: Brisbane, Australia

Construction: Began 2001

The Kelvin Grove Urban Village (KGUV) in its entirety looks at the issue at a more macro scale. The Village refers to a small city precinct or inner city suburb. The village, as well as each building making up the whole, follow similar concepts however, albeit at different scales. The KGUV looks at urban planning as a mechanism to promote health sustaining activities and social as well as mental wellbeing by providing a medium density urban footprint which is linked by access corridors and streets that accommodate motorists, pedestrians and cyclists.

4.3.2 Analysis

Kelvin grove is situated in close proximity to the Brisbane CBD and accommodates a culturally and demographically diverse population. The urban design proposal attempts to achieve a vibrant, healthy, diverse and socially sustainable urban community that has access to a range of cultural, health and educational resources in generating healthier lifestyles, behavioural patterns and community cohesion. Urban sprawl has left destinations further apart and this design looks to counteract this as well as the negative financial costs and stresses relating to this.



Figure 4.3.2.1: Aerial plan showing land use. (www.12d.com)

Vision and approach

Social sustainability is promoted by the provision of facilities where people can meet and hold activities through shared public spaces and a walkable urban fabric and contributes to the cohesion of the community and social wellbeing.

The project envisions an inclusive and sustainable community where people live, learn, work and play in one accessible and walkable neighbourhood in close proximity to the additional opportunities and amenities provided within the Brisbane CBD. The urban village attempts to promote a strong inclusive community, a safe environment and an ecologically sustainable environment through a mixed-tenure, medium density urban neighbourhood.

The primary approach is to encourage a sense of community through a highly legible urban fabric and a human scaled environment. The intention is create an environment which is not overwhelming in terms of scale and complexity and portrays a sense that the environment has

been designed with cognisance to the thoughts and needs of the community. Through this a sense of community relentlessly grows and individuals within the community have a place to call their own. A vision that the users feel a 'sense of place' is followed through the thought pattern that the built environment affects and influences human beings. Individuals are prone to identifying with meaningful environments, and that is what is achieved at KGUV, through architecture that engages humans and retains a sense of scale.



Figure 4.3.2.2: Architecture facilitating engagement at street level.
(www.binaryapartments.com.au)

Design framework

The composition looks at the traditional town design which includes a town centre, main street and business core. The main street is diverse in activities and incorporates the local university facilities, further integrating the city and breaking down borders. Residents have access to cultural, leisure and recreational activities in the centre or heart of the village. This main street is in close proximity to the residential component and enforces walkability which promotes physical wellbeing through walking and cycling as well as social wellbeing through connectivity and social capital. These corridors are mechanisms for engaging with the local context and create potential cultural associations with the significant buildings and public spaces, forming a sense of place. The retail component is focussed in the heart of the village and accessed by pedestrian and vehicular corridors and terminate at a contained town square

which is a traditional town concept and place of social interaction and community engagement, the gathering point for all, a space for the user to withdraw to and allows for human experience.

The medium density development is created by maximising the building footprint on the ground floor and develops a relationship with the street. The streets are central to the concept of this village and creating vibrant and active streets is a starting point for social sustainability. Streets work, in that they organise and activate public spaces and are essential to the social life of cities. The narrow and low scale nature of the Village concentrates public social life and helps to bring people of diverse backgrounds into close proximity. Social relations increase social capital and therefore increase the ability of an individual to advance. The more social capital is used, the more it grows.

Mixed-use vision

The vision proposes an integration of services and amenities and is developed as a collection of adjacent and different buildings rather than a single visually-distinct complex. Through the facilitation of various topographies and functionalities diversity and interest is created. The precinct accommodates a variety of social groups within the community which contributes to the lived experiences within the neighbourhood creating a sense of cohesiveness, understanding and commonality.

The precinct facilitates knowledge transfer and learning and allows people to experiment with art and experience creativity, fostering healthy minds, empowerment and kinship which are beneficial to mental health and wellbeing.

With mixed land uses, proximity to all facilities becomes easy, thus reducing car usage and resource efficiency. The reduction in car usage brings about wellbeing in that reduced travel times mean more time for family and other social activities.

As this development is at a more macro scale, more consideration has been given to elements like street fabric, block size, street design, positioning and arrangement of parks and availability of shops and civic institutions.



Figure 4.3.2.3: Streets as important as the architecture. (www.aipm.com.au)

Safety

Community safety is a critical contributor to social and mental wellbeing. The urban framework and twenty-four hour occupancy ensures that buildings focus on and overlook streets and public spaces to promote safe, active places. This is further facilitated by street access. Entrances are designed to accommodate universal access and residences incorporate a proportion of universally accessible accommodation. Buildings step down towards the street to maximise views and visual surveillance which is enhanced by effective building and ground floor lighting. Sanitation is a particular urban health consideration and garbage collection is contained within buildings in a purpose designed, well ventilated space and not left on the street to avoid contact with pedestrians.

Social spaces

The provision of green open spaces forms part of a larger open space network which links into the city and is used for leisure activities, social gathering and community cohesion and wellbeing. Through well placed green spaces, stress is reduced through contact with the natural environment. In poorer areas these green spaces are of most valuable importance as

they provide a space (with no admission fee) for families to gather, as maybe the house they stay in are too small to facilitate this. These green spaces may also generate economic activities.

The public spaces include the provision of artwork to reflect the importance and character of the area and location indicating the cultural and contextual relevance. These spaces are connected by a series of walkways and pedestrian pavements which promotes physical activity and creates a renewed focus on fitness. Here, fitness and physical activity facilitate healthy living and are enforced as preventative measures to sustaining to the health of the community. Semi-private social spaces are encouraged by the use of roof planes as outdoor living spaces and roof gardens.

4.4 COMMUNITY ANCHOR

Living Arts Centre

4.4.1 Introduction

Project: The Living Arts Centre

Architect: Zeidler Partnership Architects

Context: Mississauga, Ontario. Canada

Construction: Completed 1997

By exploiting the potential in attracting more life into its cities public spaces, the Living arts centre, Mississauga Ontario, turns itself into a destination and not just a facility.

4.4.2 Analysis

Within the exploration of reviving civic culture in public spaces, Mississauga Ontario is a forging figure. With close on seven-hundred thousand residents the city has swiftly grown to now be Canada's sixth largest city. Unfortunately Mississauga has battled to create its own identity and rather lives under Toronto's shadow. With Mississauga's City Hall, Central Library as well as the Living Arts Centre all in relatively close contact, the city harnesses massive potential, yet its public spaces and architectural attachment lacked life which

reinforced the continuing problem that Mississauga is a barren precinct with a shopping mall at its heart. With the initiative of the Living Arts centre this perception is beginning to change as the city and its architecture makes a determined effort to provide a genuine, cohesive civic centre bustling with public activity.

Vision

The vision of the project looks towards the local residents, businesses and all relevant stakeholders for help in moulding Mississauga's city centre in an animated and activated area. The key vision of the architectural typology is to contribute towards a city centre that has the potential to be a focal and anchoring point for employment opportunities, commercial activity, civic, recreational facilities and residential development.

Although the architecture itself is at a micro scale, the processes leading up to the inception of the building were of a macro nature. The city was addressed as the site and the Living Arts Centre as just a part of the whole. To avoid urban sprawl, proximity and mixed land uses were of high value and the Centre continues to address these issues at an architectural level. The Centre therefore addresses neighbourhood sustainability in that it becomes a linking feature in the greater scheme, leaving destinations more accessible.



Figure 4.4.2.1: The Living Arts Centres engaging facade. (www.pcl.com)

With placemaking being the primary goal, making this vision a reality depended on using the right process. When this revitalisation effort began, the first thing that was done was to educate in the details of what makes a great place- this included the training of more than two hundred city staff, city managers and commissioners. In order for new questions to be risen within the design process the definitive priority should be the production of place that attracts people and instils joy.

The new designs questions and concepts became: What program and functions would be a drawing factor? How can one design the spaces in and around the Centre in order to support this activity? Through this possibilities emerged such as the idea of increasing cooperation between varying city planners. The idea was to become that of using public spaces and gathering points as venues or destinations, for instance, market or performance spaces.

With the understanding that the environment influences human beings and focusing on spaces of quality or ‘genius loci’, health is encouraged back into the city through the design.

Individuals identify with the meaningful environments created and the spaces are experienced positively.

Participation and governance

The city of Mississauga is diverse in that it houses many distinct ethnic groups. Forty-seven percent of its population is foreign to Canada and all these varying origins come together to have altered desires for their public spaces. Therefore the bringing of these various cultures and ideas together was vital for community cohesion and community empowerment.

Empowerment, which contributes to wellbeing, grows out of involvement in thinking, planning, deciding, acting and evaluating, and this is what the design team of the Centre allowed for. Fostering community involvement from the outset was especially important, requiring thoroughness and sensitivity. Bringing together a diverse range of stakeholders within the planning procedures guaranteed that the design was to be geared to multiple audiences. This ensured that the public realm became more democratic and eclectic in nature, becoming locally sensitive and a forum for inter-cultural communication.

Continuing from this and going hand in hand with these ideas of placemaking and locally sensitive design was the need for a bottom-up, community based approach. The ideology was that if one wants to design a place that works well for the people who use it on the day to day, then civic engagement was a necessity in the planning processes. This meant providing

the surrounding community with the tools to a critical decision making role and allowing their knowledge and desires to guide the design of their civic buildings. This all resulted in the Living arts centre, a civic building that incorporates local character, citizens' wisdom and instils a sense of place and cohesion within the community. People naturally feel somewhat more connected to a place or space if they, or someone they know, had a role to play in its conception and this makes a vast difference in people's perceptions.

After Mississauga's city staff completed their training, they worked closely together with the community to assess their cities public spaces and civic buildings in order to suggest improvements. Ideas ranged hugely from allowing for more activities to physical changes in their makeup. The benefits to this community based approach are clear to be seen in the inventiveness and eagerness of the cities participants. These ideas and contributions are now the template for furthering development and reshaping of the city.



Figure 4.4.2.2: The Living Arts Centres lobby acts as a community gathering point.
(www.flickrriver.com)

Public spaces

The Living Arts Centre sees social capital upheld through community engagement, volunteerism and social trust. As the city is made up of a diverse community, the design concept followed was to bring people of diverse social, economic and cultural groups into close proximity. The city and the design treat public spaces as outdoor community centres. Mississauga, who already operates a network of indoor community centres, ‘normal’ community centres, with budgets for management and programming elaborated on this idea and now operates public spaces in this same way, as places that need continual management to succeed. Exterior public spaces have become ‘outdoor community centres’ where the diverse community can all enjoy coming together. The City’s 2007 draft budget set aside funds for a full-time city centre management staff, the first time the city has created a position to manage an outdoor space. The lawns and landscaped site of the Centre became the outdoor community centre for the next generation.

Mississauga’s commitment to placemaking bodes well for the future of civic engagement, wellbeing and social cohesion in the city. By creating successful public spaces shaped by the architecture that surrounds it, with real community participation, they have taken a very forward-looking and courageous step.

4.5 CONCLUSION

The precedent studies begin to elaborate on the effects the built form has on social sustainability. Concepts like Social capital, social ecology and participation provide design questions and processes that consider the greater picture.

A common thread through the three precedents is that they are all focussed at being spaces where gatherings may occur, spaces that bring lives together to create opportunities. The architecture merely facilitates and shapes these natural processes and provides spatiality that invites occupation.

“It is difficult to design a space that will not attract people. What is remarkable is how often this has been accomplished.”

The Social Life of Public Spaces, William H. Whyte (1980)

5.1 INTRODUCTION

The literature review and theoretical framework have explored the relationship between the built urban environment and social sustainability with regard to urban communities. The research has explored the consequences of urbanisation through a chronological investigation and identified the key issues and challenges. Furthermore, the precedent studies and theoretical framework have revealed a number of concepts and interventions which minimise the effects of the negative urban environment and promote physical, mental and social wellbeing, community cohesion, social capital, equity and participation with particular relevance to urban design and architectural solutions. The research now looks towards a building type as a solution to sustaining social sustainability and will explore the South African urban precinct as a case study. The aim is to develop an understanding of the local social challenges and fundamental issues in order to suggest and motivate a relevant type of architecture or building typology which will facilitate and promote social sustainability. The research acknowledges that varieties of building types are applicable and motivates the outcome as one potential solution.

5.2 COMMUNITY ANCHOR **Baragwanath Transport Interchange**

5.2.1 Introduction

Project: The Baragwanath Transport Interchange and Trader Market

Architect: Urban Solutions Architects and Urban Designers

Context: Soweto, Johannesburg

Construction: 2001



Figure 5.2.1.1: Baragwanath, the gateway into Soweto. (Claude Heyes, 2009)

5.2.2 Analysis

The Baragwanath Transport Interchange and Trader Market (BTITM) makes up part of the Baralink Development Framework. Baralink was assigned the task of integrating and uplifting the most important and influential gateway into Soweto and furthers this to tackle the issue of integrating Soweto with Johannesburg.

The BTITM is among the busiest transport interchanges in South Africa as the vast majority of Soweto's residents pass through daily on their way to work and back. Adding to the foot and vehicular traffic is the adjacent Chris Hani hospital, one of the biggest of its kind in the country. Separating the two facilities is Old Potch Road, carrying over thirty-five thousand vehicles daily. This results in a community already coming together to use one space, the architecture then becomes the incubator and the catalyst for how positive this interaction will then be. The gateway is of upmost importance as 70% of Soweto's commuters filter through the interchange and therefore the design had concepts of acknowledging this significance.

The interchange, which is largely made up of a taxi rank and market, acts as the train station of the past and becomes a gathering place for a large part of Soweto's community on a daily basis. The design captures an already created market of capital. Large numbers of people move in and around the Interchange daily. Natural waiting and gathering occurs within a transport typology, and what the design does is become a positive influence upon chance meetings and interactions. The design, through cleverly articulated spaces, such as seating, waiting or market areas assists gatherings on a more regular basis.



Figure 5.2.1.2: A stage for the community to meet. (www.gautengfilm.co.za)

The brief entailed providing a functionally efficient transport node that understood the importance of the informal trader, while being the gateway into Soweto. The design went above and beyond this as the result is a typology that functions immaculately and further understands the community and its needs. Executive Mayor Amos Masondo described this by saying "It symbolises in many ways the quest for urban renewal in the greater Soweto area."

Equity has been brought to the table through design. Once a destination of arguments and fights, long standing competition for space in the area between buses, taxis and street traders and now a thriving 'community centre' for all. In the past very few, if any, formal facilities were given to any of these sectors, taxis and traders especially. For the most part these people have been marginalised with very little access to proper public amenities and support structures. Therefore it was the portrayed idea that these sectors and these people were not part of the community and their importance was undermined Each trader has therefore been provided with solid and reliable facilities, all trading areas are under roofs and each trader has lock-up facilities. Furthering this acknowledgment of this type of infrastructure within the community was the conscious use of concrete in the design which intends to offer a more

robust and established structure. The vast length of the site meant the material had to be sculpturally designed provide an enthralling aesthetic. Further to this, traders who may not come to the market on a daily occurrence are accommodated in articulated niches along the spine whilst destination stalls and cooking facilities are accommodated in some of the support structures along the spine- a way in which to bring equity and cohesion to all. Elements like this are also seats that can be utilised as trading stalls, allowing for further social connectivity. Through democratic governance structures, in this case the design team and its participatory programs, empowerment through equity is instilled. Equity in opportunity, whether socially, economically or otherwise enables a community to grow and become stronger.

Community participation was critical to the long-term success of the project. The interests of the various sectors and their reconciliation were critical to the success of the development. The design process keep the people's needs at hr forefront and was very much a bottom-up approach. A negotiation process of nearly four years involved workshop sessions with all parties interested to come to an agreeable vision for the facility. As the development deals with the lives of so many of the community, being locally sensitive and understanding was a key concept. Collective ownership is strong in the Interchange as it was created for and with the people that use it and therefore has become well used and successful. Participation has built social capital and social capital increase the ability of an actor to advance.

The site, which is huge at 50 meters wide and 1300 meters long along the length of Old Potch Road, posed a serious challenge to the design team as they had to meet an extended accommodation schedule and functional program requests. The design concept was to use the length of the site and create an arcade as a structural backbone which happens to be the fusing element as all the functional requirements tie into this backbone. Commuters move through this spine as they travel from one function to the next. This arcade then becomes a crucial and central point of the design and within this are found the greatest allocation of traders, public amenities and public spaces. The vast extent of the arcade called for reference points to spatially differentiate the functions that happen along it. Landmark structures are used for a sense of orientation and are placed at focal points and public entry points. These landmark towers also become the focus of artwork done by local inhabitants, to enhance the sense of identity and ownership and adding to the placemaking qualities of the development.



*Figure 5.2.1.3: Informal trading niches that dual function as interaction points.
(Digest of SA Architecture, 2008)*

The six main terminals are broken with market squares. These market squares are filled with self storing stalls, benches and ablutions and act as community gathering points.

Security installations are relatively low and blend into the forms; this is due to the concentration of the facilities and the activation of all spaces, leaving users with a sense of wellbeing. Each market square or ‘brake’ can be sealed off independently, providing less area to patrol.



Figure 5.2.1.4: Landmark structures are positioned at focal points and public entry points to ensure a greater sense of orientation. (Digest of SA Architecture, 2008)

5.2.3 Conclusion

The typology may not necessarily be one that is often thought of as a catalyst for social sustainability, but what it does achieve before anything else, is that it brings people together. People gather at transport interchanges daily. As in this case, the majority of Soweto is constricted through this gateway before moving on to their daily commitments. There is an opportunity here to harness the power of this natural occurrence and add to it further concepts of human wellbeing, community cohesion etc. to deepen the possibilities of social sustainability.

5.3 UMKHUMBANE COMMUNITY HEALTH CENTRE

5.3.1 Introduction

Project: The Umkhumbane Community Health Centre

Architect: Robert Johnson Architect and Associates

Context: Cato Manor, Durban

Construction: 2001

5.3.2 Analysis

The Umkhumbane Community Health Centre (UCHC), initiated by the Cato Manor Development Association, forms part of the development plan of Cato Manor. The design has been awarded due to its typological inventiveness and engagement with the site, as well as for user-satisfaction and its synthesis of programmatic requirements.

Robert Johnson Architects have managed to take the negative factors of public health, such as queuing and waiting, and convert them into positives by transforming them into spaces so celebratory that church assemblies gather there on Sundays, an intelligent moulding of public interaction. A historically tedious place to be, adapted into a source of social capital.

Special attention has been given to the way the user feels and experiences the space. At an obvious level the building provides for the health needs of the community, at a secondary level, the design further facilitates health and wellbeing through the fabrication of spaces and experiences that maybe subconsciously do just as much positive work.

Movement is guided by a naturally ventilated route of tree-like structures supporting a lightweight canopied roof. Centralised waiting areas are where consultations occur, designed with special attention to circulation between activities. This added to the fact that care facilities are organised as pockets of space, altering with open-air courtyards to create play areas for children, add to the overwhelming feeling of wellbeing. In a facility like this promoting wellbeing, factors such as sunshine, fresh air, social interaction and equity render it superbly self-defining. The human scale and effective consideration of the user culminates in an environment that invites occupation.

The UHC is an achievement on both the public healthcare and urban design fronts. Labour for the project, whether skilled or unskilled, was sourced from the Cato Manor community as conditions within the contract stipulated 100% use of general workers and 50% skilled workers were to be found within the area. This ensured job creation and the further betterment and positive influence the project may achieve on the community. All subcontracts went to a tender process where there was a strict targeted plan in place.



Figure 5.3.2.1: Movement and gathering spaces promote wellbeing.

(www.zaiarchitects.co.za)

Cato Manor is in the process of undergoing large scale upliftment in order to contribute to the goals of a compact city form and integration with the rest of the metropolitan. As a model for integrated development, the Cato Manor Development project has attained world-wide acclaim and, much of its success has been attributed to a higher level grassroots community involvement. The project is the largest of its kind in post-apartheid South Africa. The project consists of community clinics like UHCH as well as schools, roads, low-cost housing, libraries and community halls. In addition to this the Cato Manor Development Association (CMDA) broadens to focus on the support of economic development and community empowerment through interventions like training schemes and enterprise development.

The Cato Manor Development Project (CMDA overview, 2014) identified four key opportunities in the development:

- Reshuffle apartheid planning and place low-income households significantly closer to economic opportunity.
- Integrating communities and symbol reconciliation and non-racialism.
- To establish guidelines and frameworks which will assist in other similar projects nationwide.
- Relooking the transport infrastructure and linking Cato Manor to increased opportunity.

At an urban level the design looks towards the future of Cato Manor as a larger community than at present. Site selection is important in that it has the opportunity to contribute to the reduction in urban sprawl and become an anchoring facility within the community. The surrounding community is certainly affected by the manner in which mixed land uses increase resource efficiency by reducing car usage through proximity. Not very long ago, the people of this community would more likely have spent many more hours on a monthly basis walking to and from necessary amenities, where now financial costs and stresses relating to

commuting fall away tremendously. Instead of spending time commuting, individuals may now spend time with their families or being social.

At an architectural level, the scale of the Health Centre engages successfully with the street by individually articulating its different building components. Maybe one of its greatest achievements however, is that it also sets a strong pattern for future development with its rejection of introverted and intimidating public service buildings. This is crucial for the acceptance of the Health Care facility into the community. Passer buyers are attracted and engaged rather waved away. This allows the building, although it doesn't necessarily have as big a pulling factor as a transport interchange, to harness the energy of the community and bring people together. From a typological point of view, the Health Care Centre has aligned the clinic with an evolving, responsive South African urban vernacular.



Figure 5.3.2.2: The design rejects introverted and intimidating public service buildings.

(www.zaiarchitects.co.za)

The greater idea is to bring in other institutions that will use spaces in the facility to provide complementary services, making it a vibrant facility offering a wide range of health care services, thus adding to the potential of its social development.

5.3.3 Conclusion

One finds in this building small and intimate detail of how architecture can be fashioned to promote the concept of social sustainability. What this typology may lack in pulling power against the likes of a transport interchange, it gains in its programme. Health promotion is another vital cog in the wheel of social sustainability. In this example, an everyday need is identified and instead of answering with architecture that only answers the immediate question, a typology is created to further emit the concepts of social sustainability.

5.4 CONCLUSION

Through the case studies come an understanding of the local social challenges and fundamental issues, how they are dealt with, and how architecture may effect a change. Two vastly different typologies are examined through the case studies, indicating the possibilities of various typologies as having the potential to inflicting change in social sustainability. Both examples however look past the immediate context and gaze rather at the further reaching and more demanding and complex nature of the surrounding community and community setting. Both designs fulfil their programmatic roles while achieving more than the brief may have asked of them.

A typology that brings about wellbeing, social engagement and encourages a civil society through, ideally, a democratic governance structure is a typology integral to building social sustainability.

CHAPTER 6 ANALYSIS AND DISCUSSION

6.1 INTRODUCTION

For this questionnaire 270 emails were sent to architectural companies throughout South Africa and Africa. The email addresses were chosen at random from the Web Directory of Architects. Out of 270 emails sent, in total 22 responses were received from architectural professionals. The questionnaire was completely anonymous and each person had the option to reply or refuse. The questionnaire was answered via an internet based survey platform. The aim of undertaking this questionnaire was to ascertain whether people in the architectural

profession believe that architectural environments have an effect on social sustainability. The full questionnaire and percentages on each question can be found in Appendix 1, however for the purposes of this chapter only the most prominent themes and responses are highlighted.

6.2 ANALYSIS

Question 4: Do you believe Architecture can affect social sustainability?

Interestingly, all answered Yes to this question. Not one answer came in that was negative towards the deliberation that architecture may affect the social aspect of sustainability. What is astonishing about this result is then the answers that follow this up- how many answers are given in later questions that then do not cement or support this. In this I realise that, although the idea is strong enough to achieve a 100% positive answer, the reality is, that it is not being followed up within practice. So all architectural professionals, within this survey, believe that architecture is powerful enough to infuse positive sociability, however achieving or implementing this may be tougher than originally assumed. Advantageously, to this study, architecture is seen as a catalyst for social sustainability, and through correct implementation may have the desired affects and more.

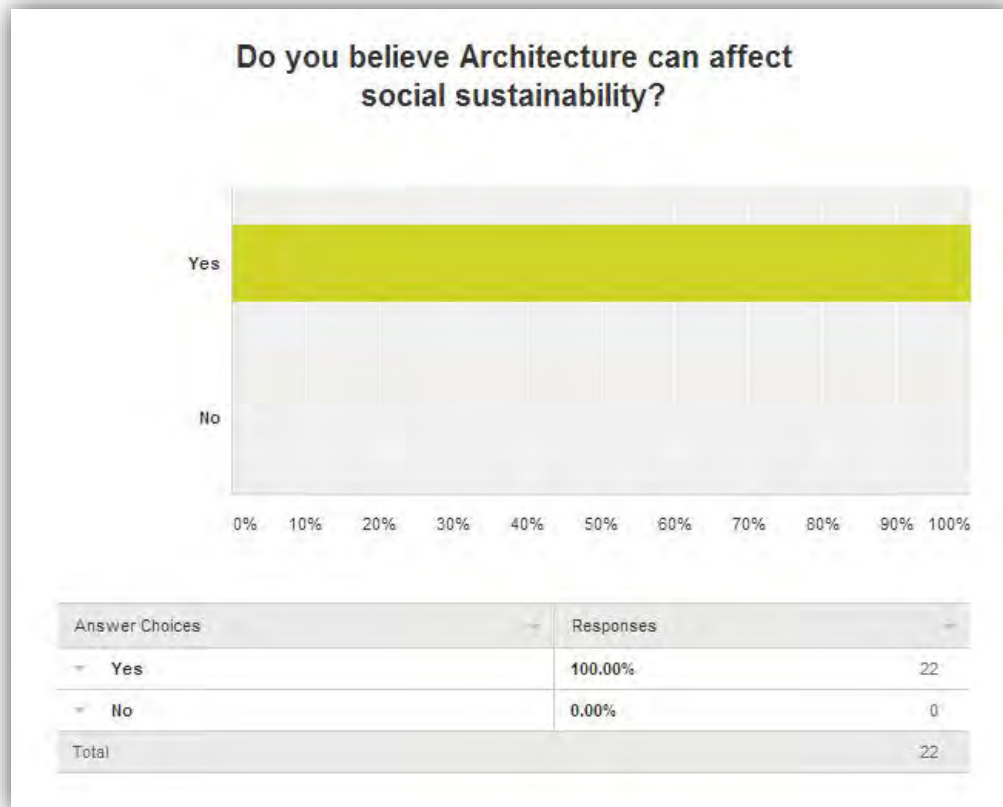
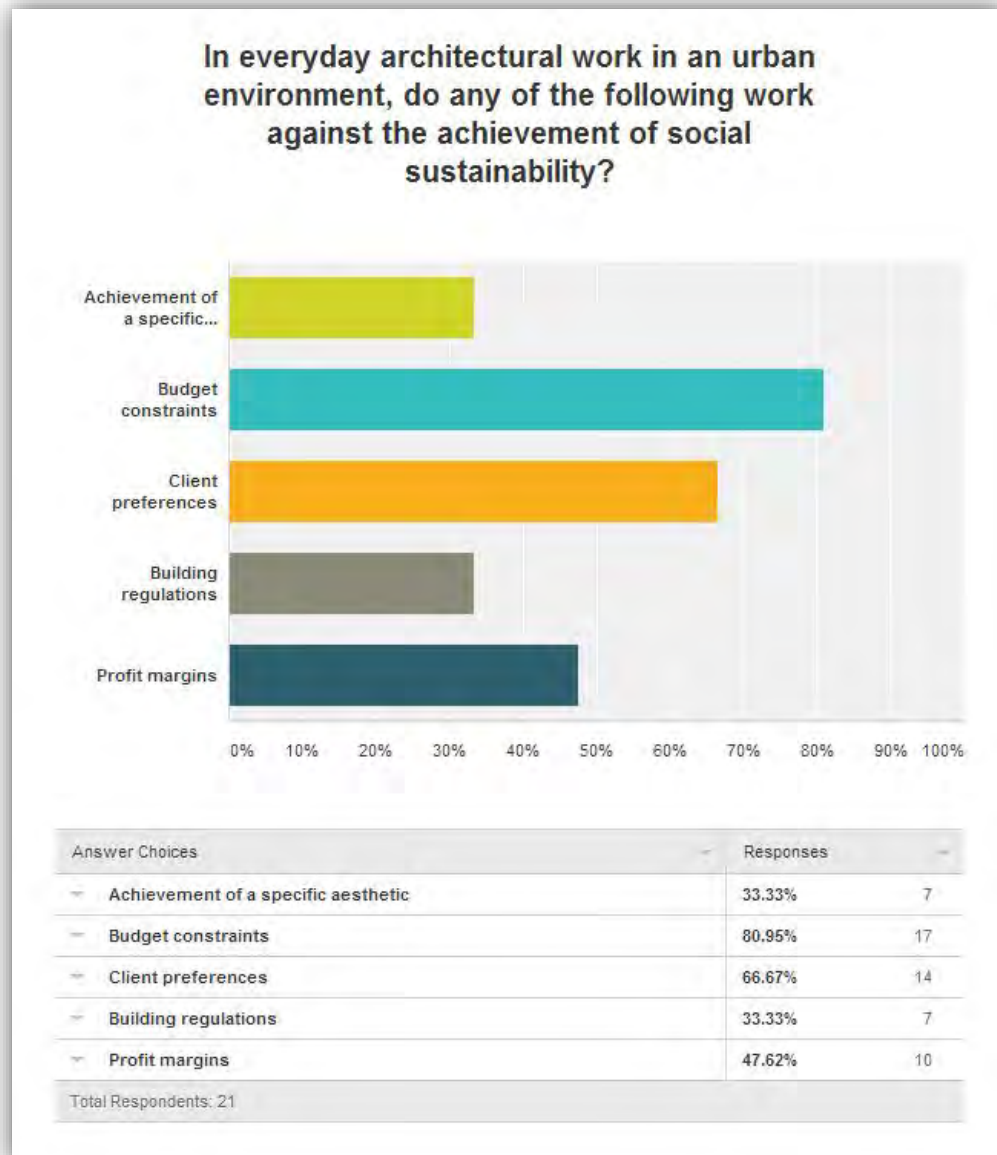


Figure 6.2.1: Response graph to question 4

***Question 5:** In everyday architectural work, in an urban environment, do any of the following work against the achievement of social sustainability?*

What is hampering architecture in the facilitation and generation of social capital, wellbeing and positive social environments? According to the answers, there are several fairly strong deterrence. Foremost are budget constraints. So is considering socially sustainable implementation in architecture expensive, or is this just a defence on the part of the architect to avoid the situation. Possibly, one may assume, that considering all the concepts of social sustainability may mean longer design times and design phase initiatives and therefore be affected by budget constraints. Would it be impossible to think of a world where socially sustainable architecture receives incentives and breaks- as do 'sustainable' buildings through initiatives like the Green Buildings Council of South Africa?



Figure

6.2.2: Response graph to question 5

Client preference comes in as the second largest obstruction in socially sustainable architecture according to the feedback. This may be partially fault of the architect, as the architect or designer is the ‘salesman’ within the development process. Possibly more should be done on part of the architectural team to relay these kinds of issues over to the client, making the client more aware and understandable of the issues at hand. As the architect has more understanding of the field, time should be spent to make the client more aware of the greater picture and the far reaching possibilities that the architecture may be able to realise.

Often, in terms of bigger projects, and those with the greatest reach, the government is the client. Democratic governance is central to socially sustainable contexts, as has been described already. Through combined efforts with civil society, possibly through consultation and participatory practices, design briefs (client preferences) need to become more deliberate in their attainment for socially improved environments.

Question 6: In both past and present projects, do your designs consider the social impacts incurred?

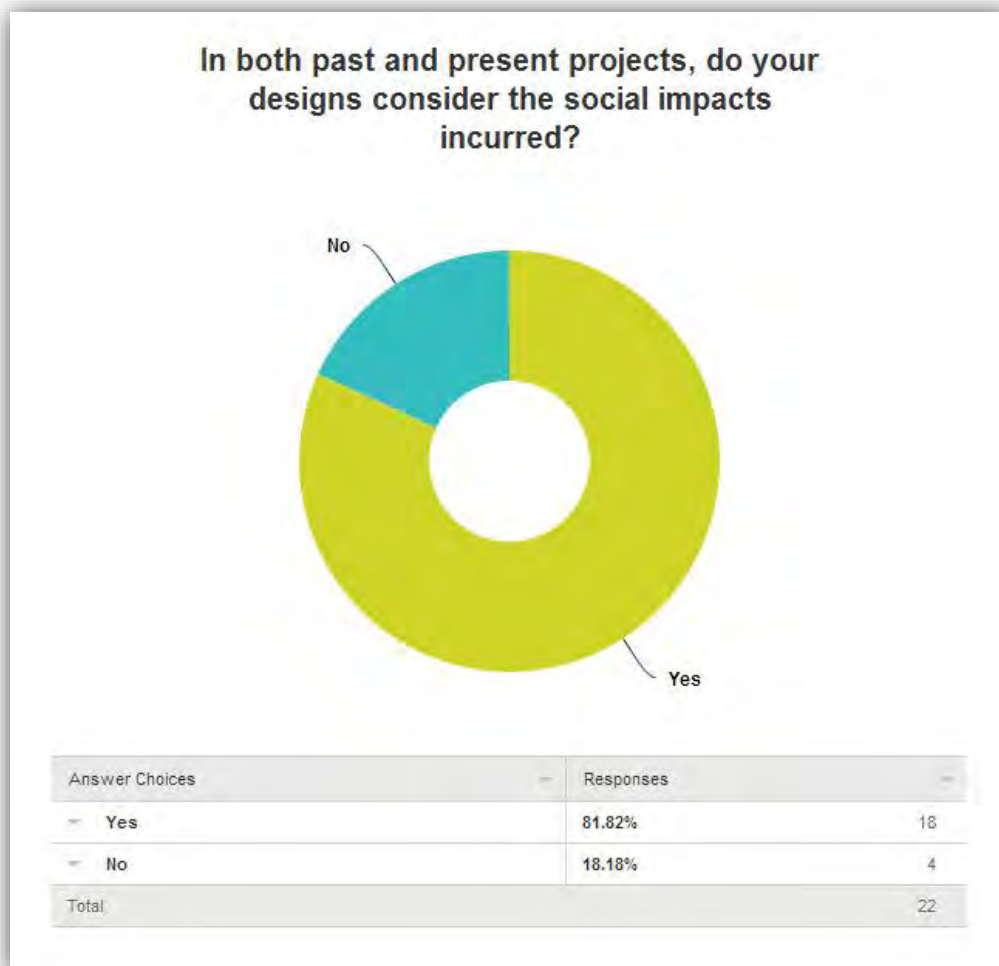


Figure 6.2.3: Response graph to question 6

From this, one can take that the majority do consider and take responsibility for the social impacts their designs have on the contexts they are placed. So if the greater percentage do

consider and are concerned by this, why is it that socially sustainable environments are few and far between?

One can only presume that the majority of designs consider the social impacts incurred at only a minor scale or there are greater problems at play. Possibly there is a disconnect between development at a greater scale (urban design) and the individual architectural interventions for each site. For architecture to reach a state that can be called socially sustainable it will have to work at a neighbourhood level. Architecture needs to be responsive to its context and work together with the built form around it in order to effect at a greater scale. Dense, engaging, linked urban environments cannot be achieved through single works of architecture. Urban fabrics need to weave to achieve the most a setting has to offer.

Question 7: Does your urban environment create a platform for social interaction to occur? If yes please list the key contributing factors that allow for this.

One of the responses was; “....it must be said that South African cities are very spread out as opposed to European cities. This inhibits natural interaction. Most of our social interaction takes place at shopping malls or sports events. Improving the density of our cities in a responsible creative manner will greatly assist with this social integration”.

This highlights the fact that improving densities at an urban level is of high importance. As discussed in the conclusion of Question 6 however, this is best achieved at an urban design scale, and therefore each building that makes up the urban fabric has an intrinsic effect on the community and its neighbourhood. Cities and the buildings that make them up must become the platform from which social connectivity stems and social capital is produced.

A second answer was; “Creating thresholds and if possible programming these with functions and uses, i.e. Taxi Rank and linear market defining the street realm through built form”.

Defining the public realm through the use of the built form creates a positive and influential environment. Human beings are prone to being positively effected through spaces of quality and interest. Fortunately, human beings have a natural tendency to want to be social, and architecture has the ability then to be a manipulator of this. All architectural interventions should all be looked at as being thresholds for the sociability of the city.

Other contributing factors within the answers included; “provide areas for people to pause in well thought out spaces. Landscaping is essential and protection from the elements”, “Street level interaction, shops etc.”, “Common shared spaces”, “Places for people to interact in safe environment with passive security measures such as overlooking windows are created”.

From this I deduce that well thought out, activated and secure social spaces are a key element in supporting social sustainability, and should be a focus area to all design work.

Question 8: Does your urban environment create a sense of well-being? If yes kindly provide a brief description of the elements that contribute to this

One answer describes an environment that creates a sense of well being as “Places of human scale where persons feel welcome and are offered a reason to linger, rest, talk, observe, play, think (and) meet. Elements such as correctly designed and sized piazzas, where people are led in due to heading for a destination , then discovering the space and the persons already in it , like walking through a medieval village town principle.....with overlooking features / life”. In this is described an environment that talks of human scale and human engagement. An urban fabric that creates spaces for people to come together, interact and meet that are activated by the uses that surround it- “Humanist spaces that respect human ergonomics, phenomenology, and socialization”.

Another answers state; “Yes, there is growth and development happening in and around my community, we are moving from a crime driven derelict environment to a stable, safer environment. Driven people with balls and big ideas are making things happen”, “human scale and safe environment lead to happy people”, “pedestrian access, bicycle lanes”, “Identity, landmarks/ icons, breathing space”, “very green leafy area which is naturally very therapeutic”. All of these describe environments that generate a sense of wellbeing.

If one could summarise these answers you would be left with: Safety, human scale, connectivity, focal points and engagement with natural environment. All of these themes are important considerations in the design of the urban environment and should be thought of as reliant upon the next. Achieving one without the next translates into the architecture falling short of its goals.

Question 9: In both past and present projects, do your projects consider participation in planning and input from the effected community? If yes, please provide a short description of participation practices followed

Answers in this category ranged from “If you engage with the local community you will never build anything, experience is what counts” to “Yes. Way finding and signage development in a rural/ low income community with a low literacy rate and a first language which is not English. Workshops with the community to be a part of creating artistic signage for all to understand by creating universal symbols relating to the immediate community and educating about what many other symbols mean and how they can be used”.

These two answers summarise the findings to this question fittingly. Some see no relevance in the use of participation processes while others believe simple signage techniques that were developed with and through the local community have outstanding results. In the case of the signage development, the design team has begun to understand the local community and its needs and programs. It has been seen that architecture that focuses on the local activities and the habits of its people, understands local life and therefore brings its users together and unifies the community.

6.3 CONCLUSION

It is seen through the survey that many do believe, and many are in the process of attempting to create, environments that foster and nurture social sustainability. The problems are seen when there is a breakdown in the continuation of the urban fabric. Architects need to be able to come together, or work together in the larger scale production of socially conducive environments.

Social sustainability is achievable through the architecture of the every day, although it needs to be brought to the forefront of the design mind, as is environmental sustainability. If every design considers the ramifications of its social influences and sees architecture as defining and considered catalytic to social sustainability, then there would be a lot more constructive result.

7.1 Conclusion

Relating back to the main research topic, architects ought to aim for a design that truly serves the needs of the community and searching for a better state of social sustainability, while at the same time remaining economically and environmentally sustainable. As is the case throughout the majority of the world, rural populations are declining while cities become overpopulated, yet, all the while, the psychological distance between us as citizens widens. With these shifts in the state of norm are born new challenges to human environments.

How does one 'do' social sustainability? It is a complex task, and there is no single answer or governing body that provides the answers to this. It requires an integrated approach and the coordination of many contributors, among which the profession of architecture offers a unique skill set.

7.2 Recommendations

Social sustainability at its most basic understanding is the assurance that basic needs are met for all members of the community. Social sustainability must, among other things, seek to bring people together, to weave the various parts of the city into a cohesive whole, with the framework, ideally, of a local governance structure which is democratic, efficient and equitable. Architecture therefore needs to enable individuals to meet or enlarge their capabilities and to put this to best use economically, socially, culturally and politically.

Many city environments are not pleasant places to live and especially not to raise a family but people are drawn into cities because they offer high accessibility, convenience and opportunity. Urbanisation is a theme of our times. The reality of urban sprawl in modern cities has lead to segregated communities. Reducing urban sprawl is a vital cog in achieving social sustainability. Counteracting urban sprawl, reducing travel times and distances people have to commute to and from places of work, residence and social activities, allow individuals more time with their families and communities, and thus of high importance.

There is a relationship between architectural environments and how an individual's wellbeing may be affected. Social wellbeing is realised when people and communities enjoy long, healthy and creative lives and continually enlarge their choices in all of life's affairs, income expansion does not automatically improve social wellbeing. Physical environments affect one's life and the shape of a building affects one's wellbeing and one's behaviour. For architecture to be able to affect social sustainability positively, it must understand the dynamic interrelations between people and their environments. It may begin with the basic human needs of sanitation, shelter, water and nutrition and become more complex to account for a 'sense of place' or 'genius loci'.

A main goal of social sustainability is seen as reducing sub-urban sprawl. An increase in cities resource efficiency is a starting point, and allows for higher living densities without roads becoming overcrowded and mobility suffering. This is shown to be achieved in high density cities by mixed land uses with residence, employment and recreation within close proximity, reducing car usage. Mixed land uses also allows for twenty-four hour use and occupancy meaning public spaces are overlooked and wellbeing upheld through security. Wellbeing is otherwise further supported through the interpretation of space. Modern buildings break the sense of scale between architecture and humans and this places emphasis on buildings and commercialism rather than human engagement. Public squares and gathering points are identifiable elements that have the ability to create excitement and attraction while bringing people of varying backgrounds together and display an ornate understanding of the happenings and goings on of local life of the inhabitants. Green spaces or a sense of connection with the environment may reduce stress may provided restoration over the harshness of concrete form. Green space can generate recreational, economic and social facilities within an urban context and provide spaces for people to gather and activities to promote congregation. These green spaces are even more crucial to poorer people in our rapidly urbanising cities as they ask for no admission fee and they are at times the only option for entertaining kids, promoting healthier lifestyles and opportunity for social interaction, allowing citizens to meet and chance encounters to take place.

A basic relationship is formed between man and his/her environment; individuals are prone to identifying particularly with meaningful environments and therefore wellbeing has strong ties to 'genius loci'. Architecture that focuses on concepts such as this brings health back to drained urban areas through elements like interesting public spaces and the atmosphere of a place and the quality of its environment. This implies that architecture should transcend its

early definition of solely creating spaces that are habitable and consciously look to achieve greater goals. Moving towards an architecture of place can transform civic buildings into key anchors of their communities and place making around these community anchors is an important way to bolster our cities.

Democratic governance, although an umbrella influence, promotes civil society, participation and equity. Democracy provides oneself with information and skills critical to make choices, a voice, the freedom and the opportunity to actively participate. It is important to prioritise democratic governance to direct economic activity towards the desired societal needs, a process that is designed to enhance the wellbeing of the majority and may be instilled through architecture. Democratic governance refers to governance that promotes community participation. Strengthening democratic participation is a direct articulation of democratic civil society and ensures that governance is oriented to the people, stabilising the community and advancing the democratic cause. Through facilitating civil society's engagement and being responsive to its people, government cultivates the democratic polity, nurturing and reinforcing a democratic culture and in turn sustaining democracy. Responsive governments are accountable to the people, ensuring economic and social policies address people's needs and aspirations, ensuring the vote to those who bear the costs, limiting the rights and powers of absentee owners, and holding decision makers liable for the harm of their actions. Democracy is in essence the rule of the people, by the people, for the people.

Civil society can be used to indicate and understand the important matters of social life. A unified community becomes influential in delivering local services, encouraging ideals and provides people with a voice for dealing with a diverse range of issues that impact on a community's existence, and architecture can be the vehicle for this. A strong civil society produces a continued wellbeing and a civic togetherness. Through association people interact, find common ground and empower and inspire each other to engage in activities to promote the common good, this participation is put under threat when individuals and communities become excluded.

From civil society and governance that is democratic comes participation, it is the coming together of the effected community as to positively affect their own development and future. Wellbeing is positively stimulated when the residents of a community are able to come together to influence their context and situation and therefore wellbeing is substantially

higher in areas like this. For the architecture we create to reach its ideology of implementing social sustainability there will have to be a shift towards participation that can empower communities and the people that make them up, moving from the top-down to the bottom-up approaches, approaches that take into consideration and understand their contexts. Participation has and will continue to enhance positive development where communities are left empowered and willing.

Architecture's role should extend into that of protecting basic rights and needs and continue to encompass fundamental freedoms, protection from discrimination, elimination of poverty, expansion of choices in all realms of life and protection from economic, physical and political catastrophes through the development of equity. Equity, which addresses equal access and social justice for all, stands central to the idea of sustainability. Through bringing about equity within architectural design, people become the primary beneficiaries of the production process and not seen as only an input into it, hence their wellbeing becoming the purpose for economic development. Whereas inequity leads to forced separation from the market place, social exclusion, unemployment and ultimately diminishes people's ability to sustain themselves and their families. Social sustainability cannot be secured unless the built form pays attention to such considerations as changes in access to resources and in the distribution of costs and benefits. Eradication of inequities should be of the greatest importance.

The theory of social capital however identifies itself as being the strongest stepping stone towards social sustainability through architecture, with its emphasis being on social relations that increase the ability of an actor to advance her/his interests. For social sustainability to be achieved it would require that social capital be maintained at sustainable levels for future generations, and strongly initiated through the built environment. Civil society is the primary tool that architecture may use in producing social capital in our cities. Through association people interact, find common ground and empower and inspire each other to engage in activities to promote the common good. Urban environments and architecture need to encourage social connectivity through social interaction and engagement. Social capital can be upheld in architecture and the design process through community engagement, volunteerism, informal sociability and social trust. Architecture can have effects on building trust-based relationships between individuals, and thus can stimulate the appearance of social capital. Through strong social networks come many benefits: from a sense of belonging and

attachment, news and information, childcare, protection and security through to job recommendations.

Bringing people together is a very important concept that instils itself in many social sustainability theories. The well connected are more likely to be hired, housed, healthy and happy. We should strive to create architecture that is animated and activated by the business and activity of its occupants and space that are alive with people and culture. Architecture should invite occupation through spatiality because it understands the fragile and complex mutual connection that exists between people and spaces, between community and architecture.

Streets, although not architecture, are defined and activated through the built form that lines them. The streets that architecture is to shape are an ingenious and effective means of organising and activating public space and are indispensable within the social realms of cities. Networks of streets make for a more permeable city and create easy means of linking, while establishing strong visual and spatial connections between the surrounding communities. A tight network of streets creates a strong visual and spatial connection. Architecture should be particular in being honest to the scale of a place, concentrating on the public social life and thus, architecture can bring people of dissimilar social, economic and cultural backgrounds together and create the potential for a vibrant and powerful social scene. Equally important is the relationship between the street and the buildings, a strong visual connection between the linings built form and the street means that every inch of public space is overlooked or naturally policed and therefore contributes to social gathering.

Architecture should establish and house a vibrant combination of uses including leisure, retail, business and residential. This mixture of uses creates a richly diverse local culture and twenty-four hour day occupancy, allowing for social gatherings on a more regular basis. A vibrant mixture of uses should always be envisaged and designed to configure and uphold energetic and colourful public space, securely hemmed by a hard edge of buildings.

Great public places contribute to community health they are an extension of the community and a stage for our public lives. Architecture should be designed as the ‘front porches’ of the civic realm, where we can interact with each other and with government and should become

settings where celebrations are held, where exchanges both social and economic take place, where friends run into each other, and where cultures mix. Civic buildings should make sure they are places where ideas can be discussed and where the population can come together for many reasons. When cities and neighbourhoods have thriving civic spaces, residents have a strong sense of community. We need to create an architecture of place, one that can convert civic buildings into key anchors of their communities as this is an important way to reinvigorate city centres and downtowns.

Through failure to reverse civic distrust, cities will be large in population yet not worth inhabiting. Though urban migration has brought many closer together, we are suffering from loss of social capital. The glue of a democratic society, the connections we should have with the people around us, is being inhibited and undone by streets that favour cars at the expense of pedestrians, public buildings that damage rather than uplift the vitality of cities and commercial developments that inspire consumerism rather than social interaction. If our architecture and our cities do not allow for people to gather in public spaces, if lobbies do not allow for conversation and contact then what future is there for the idea of a shared civic culture within the changes affecting today's cities.

The natural instinct for human contact however has not left us, it has only been suppressed. We can yet push to create a culture of civic engagement and architecture is perhaps the best forum in which to do so. People still want to gather, our public buildings and the spaces around them can still foster civic ideals such as democratic participation and cultural expression, and it is simply a matter of enabling people to use these places as they are naturally inclined.

Public institutions can find new ways to nestle themselves within modern communities and cities, and through this begin to take on different roles within the city and this is achievable in many ways. Location is the first and quite possibly the most important. Situating themselves in areas where they can relate and coincide with other civic institutions, ideally within our cities, than can captivate and activate larger audiences and programs. As an example, instead of a church, library, post office or community hall being a standalone structure with a relatively low program, civic institutions or buildings should look at building into a greater whole, where the programs generated may feed off each other and the audiences captured may become broader. Civic buildings that undertake this challenge may venture past their traditional programs and further their mission by captivating larger, more all inclusive

audiences by offering a wide range of community needs and forming interdependent partnerships. Why should we not use outdoor spaces as a further way to develop this ideology and a way of connecting the community and these civic buildings? There is huge potential in using outdoor spaces as public spaces and through this creating more public activities and bringing more people together. The results of this could be astounding and there is no ceiling in the potential of their catalytic role in communities.

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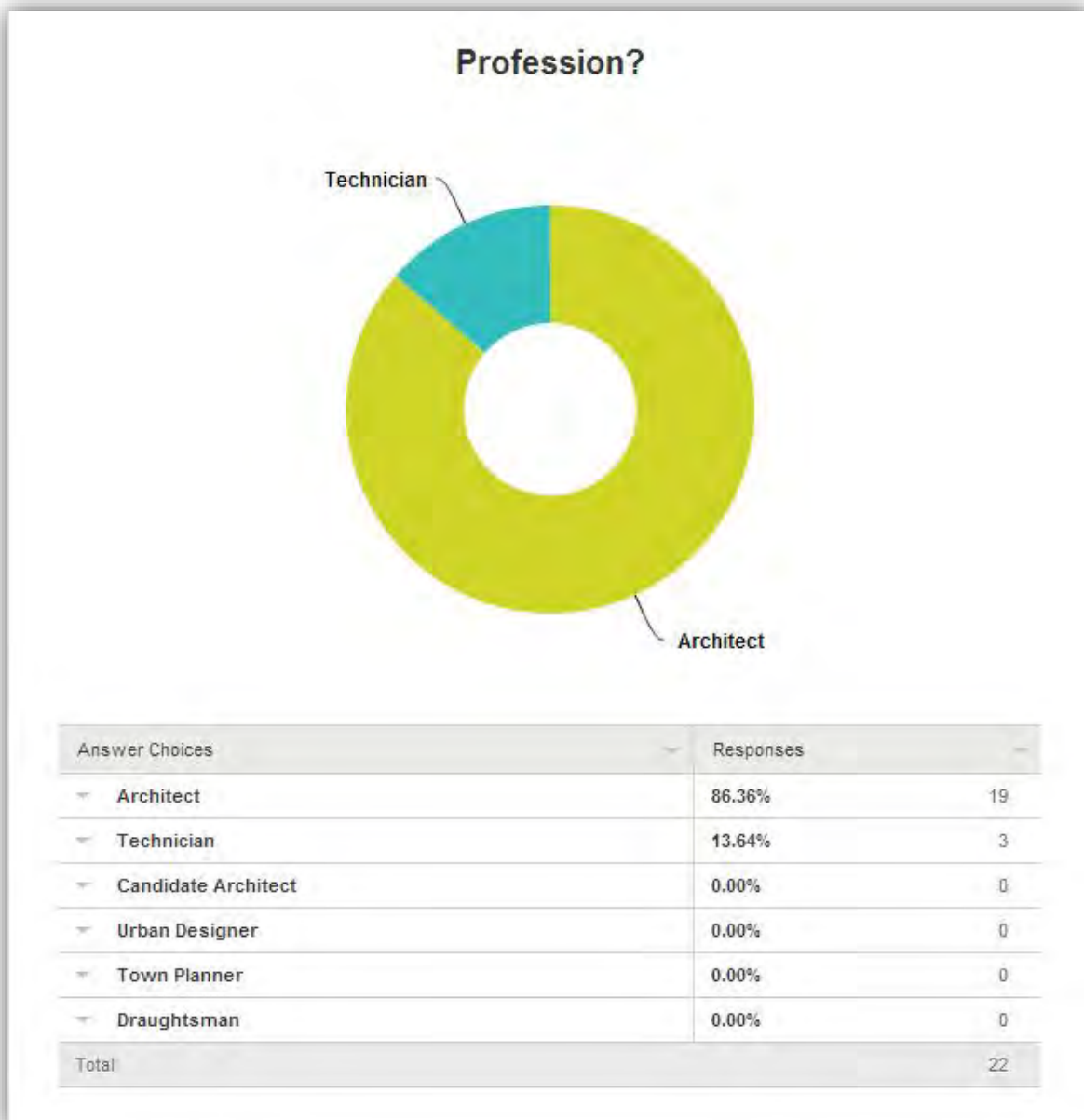
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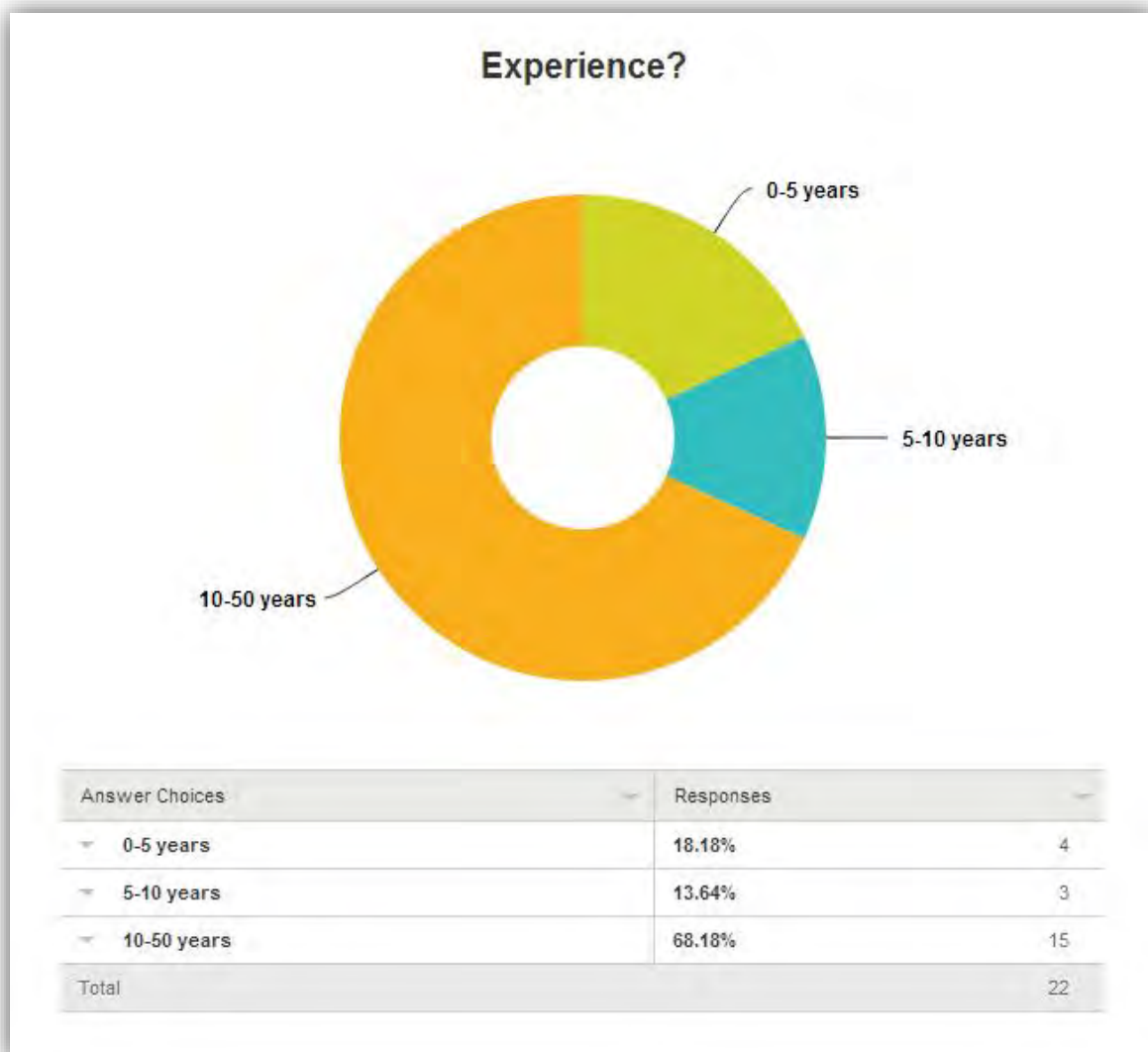
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SURVEY QUESTION AND ANSWERS

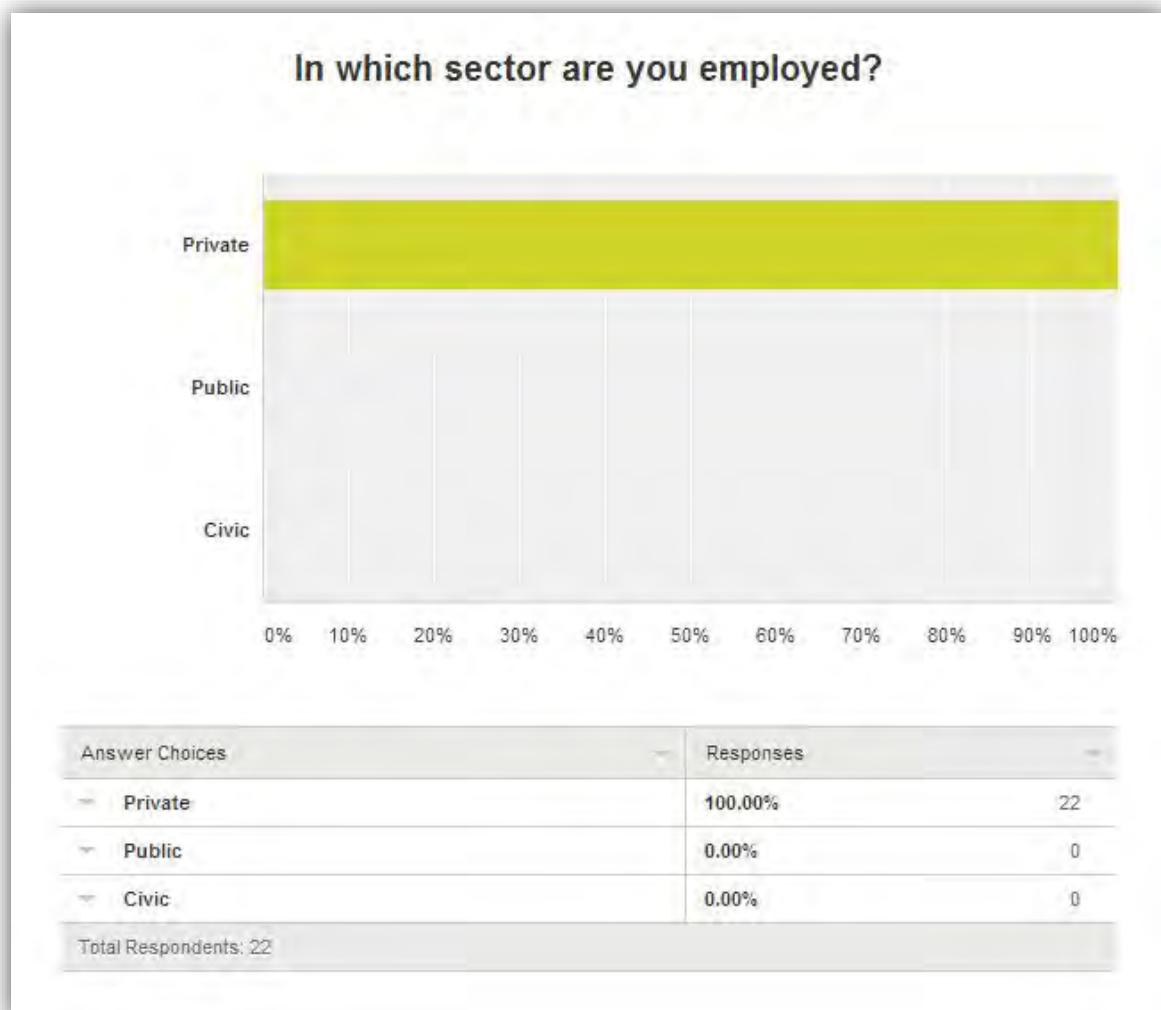
QUESTION 1 - Profession?



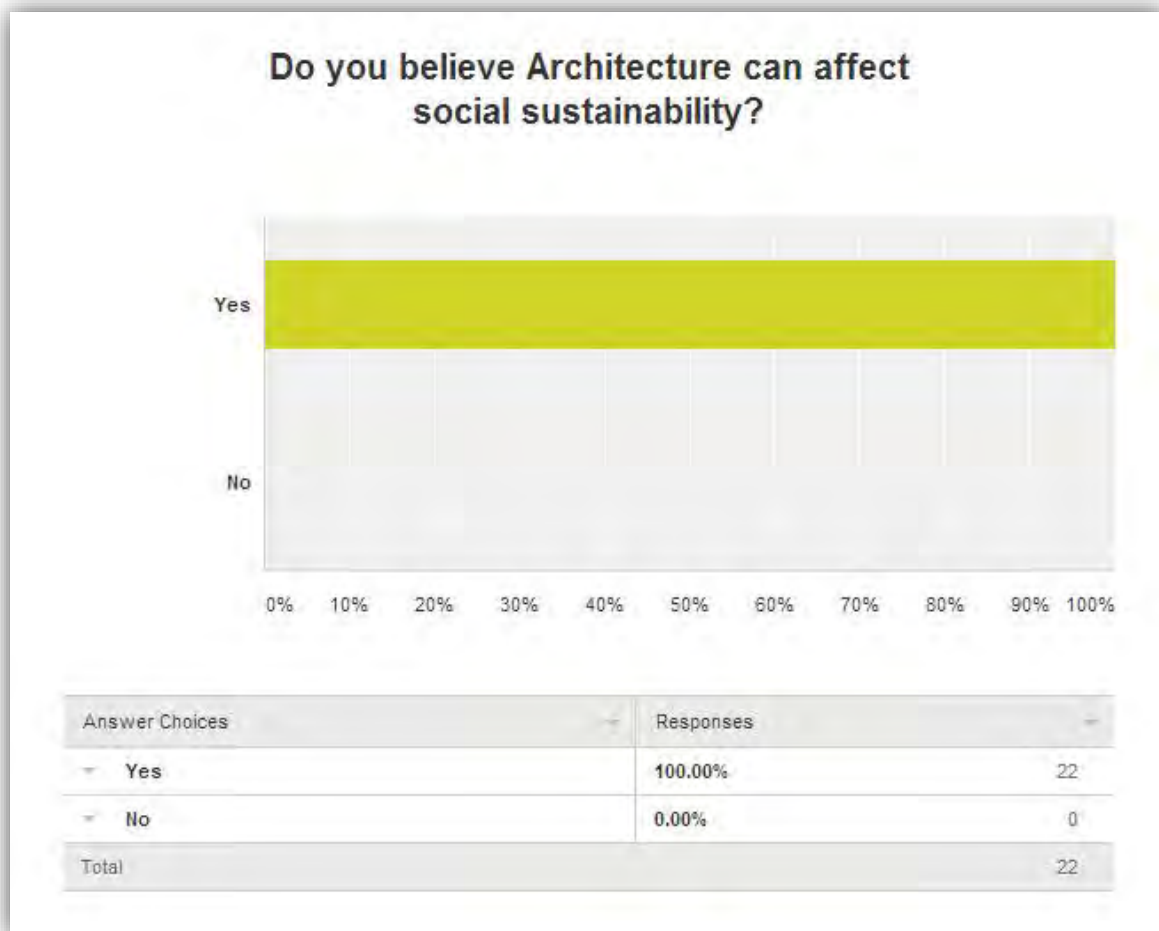
QUESTION 2 – Experience?



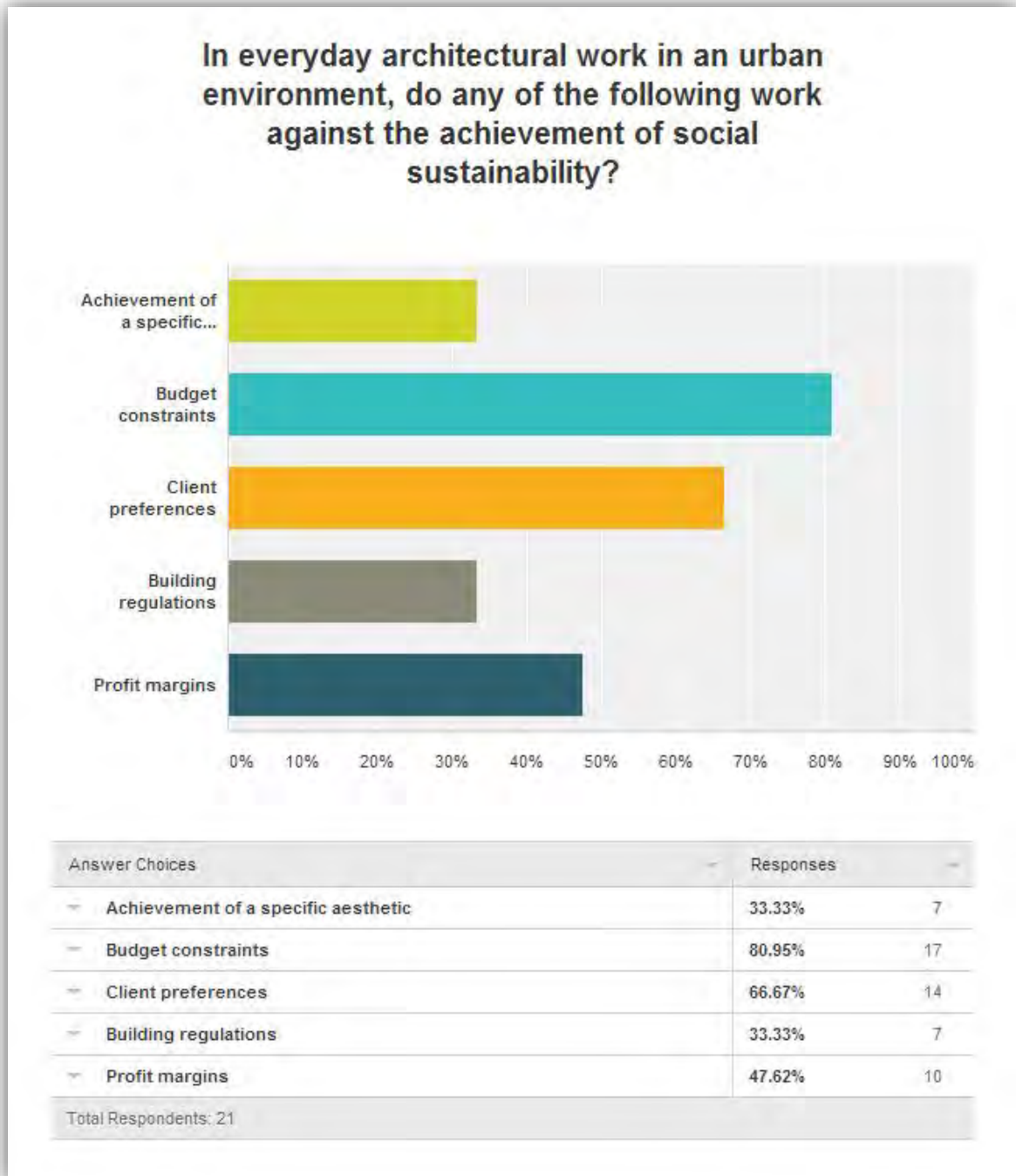
QUESTION 3 – In which sector are you employed?



QUESTION 4 – Do you believe Architecture can affect social sustainability?

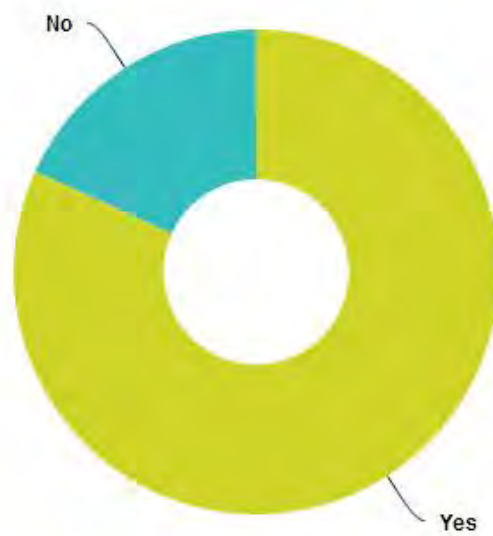


QUESTION 5 - In everyday architectural work in an urban environment, do any of the following work against the achievement of social sustainability?



QUESTION 6 - In both past and present projects, do your designs consider the social impacts incurred?

In both past and present projects, do your designs consider the social impacts incurred?



Answer Choices	Responses	
Yes	81.82%	18
No	18.18%	4
Total		22

QUESTION 7 - Does your urban environment create a platform for social interaction to occur? If yes please list the key contributing factors that allow for this

- Open identity through multiple interpretations of space.
- No.
- No.
- Yes - provide areas for people to pause in well thought out spaces. Landscaping is essential and protection from the elements - simple but effective.
- Yes and no, yes we can socialise in the pub or on the sports field or outside church. No, because we have no social hall or social interactions outside of the previously mentioned, for local public opinion to be expressed, ideas and workshops to happen.
- The environment we work in or the environments we design. We have not designed any public urban environments.
- No.
- Yes, on master plan level - town planning forum.
- No.
- Sometimes. Scale, flexibility, public / private interaction, commercial viability.
- Street level interaction, shops etc.
- Common shared spaces.
- Not really, but this is a much needed interactive link not present.
- Public sitting rooms.
- I assume you mean the environment that we live in as opposed to the work we design. If so it must be said that South African cities are very spread out as opposed to European cities. This inhibits natural interaction. Most of our social interaction takes place at shopping malls or sports events. Improving the density of our cities in a responsible creative manner will greatly assist with this social integration. One should avoid deliberate social engineering as this is exactly what led to the now abolished group areas act.
- Yes.
- Mainly do residential work; relationship to the street that is visually permeable and creates life on the street is the main contribution to social interaction.
- Yes.

- Yes. Places for people to interact in safe environment with passive security measures such as overlooking windows are created.
- Yes.
- Creating thresholds and if possible programming these with functions and uses, i.e. Taxi Rank and linear market defining the street realm through built form.
- Yes.

QUESTION 8 - Does your urban environment create a sense of well-being? If yes kindly provide a brief description of the elements that contribute to this

- Humanist spaces that respect human ergonomics, phenomenology, and socialization.
- No.
- No.
- Yes - human scale and safe environment lead to happy people.
- Yes, there is growth and development happening in and around my community, we are moving from a crime driven derelict environment to a stable, safer environment. Driven people with balls and big ideas are making things happen.
- The environment we work in or the environments we design. We have not designed any public urban environments.
- Yes.
- Yes, pedestrian access, bicycle lanes.
- Yes.
- Sometimes. Identity, landmarks/icons, "breathing space".
- Density, security, demographics.
- Levels, furniture, scale, landscaping.
- Not at all, as the majority do not have the vision to maintain or appreciate the value of well maintained services and infra structure.
- No.
- Yes it does. I live and work in a very green leafy area which is naturally very therapeutic.
- Yes.

- Yes - an environment that feels friendly, has a sense of community is enhanced by residences having a relationship to the street that is visually permeable and creates life on the street.
- We hope!
- Places of human scale where persons feel welcome and are offered a reason to linger, rest, talk, observe, play, think, meet. Elements such as correctly designed and sized piazzas, where people are led in due to heading for a destination , then discovering the space and the persons already in it , like walking through a medieval village town principle.....with overlooking features / life.
- Yes
- Hopefully they do. We have not conducted scientific post-occupancy surveys, but from speaking to and interacting with users of the Taxi Rank and the Lufhereng Housing we ascertain that these environments have a quality which fosters social interaction and well-being. In this project the houses were cited as close as possible to the street and verandas provided to soften the threshold between private and public.
- Yes.

QUESTION 9 - In both past and present projects, do your projects consider participation in planning and input from the effected community? If yes, please provide a short description of participation practices followed

- Frequent consultation, workshops using models, drawings, photographs, storytelling etc.
- No.
- No.
- If you engage with the local community you will never build anything, experience is what counts.
- Yes. Way finding and signage development in a rural/low income community with a low literacy rate and a first language which is not English. Workshops with the community to be a part of creating artistic signage for all to understand by creating universal symbols relating to the immediate community and educating about what many other symbols mean and how they can be used.

- Yes. We talked to a school and the community about a school library. It was important that the community accepted the project.
- No.
- Sometimes - mostly do smaller projects.
- Yes.
- Not much, mostly do private housing.
- Deviation from regulations requires neighbour participation. green building principles require input from consultants.
- No.
- Only in government assignments.
- No.
- This depends greatly on the type of commission. If it is a community type project there is always a great deal of community participation.
- Yes.
- Only in compliance with zoning and heritage requirements for public input - while public comment is a great idea, the manner in which it is undertaken tends to have a negative, rather than positive outcome.
- Sometimes - not always.
- Public meetings where the project and its goals are presented and comments and discussion welcomed.
- Yes.
- In some of our projects participation is central, i.e. Informal Studio Ruimsig and in others we have employed research to develop the brief, and our client thinking (Housing and the Informal City).
- Yes.

PART TWO – DESIGN REPORT

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Social disorientation and segregation is a reality of the times. With more people than ever before confined to urban spaces, the built environment is being forced to play a more important role in the defining of social realms and sustainability of social groupings. The importance of these spaces is being highlighted within the commotion that is going on around them.

The world over, increasingly more people are moving into urban cities or precincts and this societal shift from a rural to a predominantly urban one is accompanied by vast changes in many phases of social life. Factors like urbanisation, urban sprawl and economic upheaval have led to hard times in South Africa, and many other countries in the world. Although people are seemingly living closer together, their environments leave them feeling socially disorientated and segregated through negative relationships between the built form and the people it is housing.

The design therefore looks to deal with the relationship between architectural interventions and the social health of our urban precincts. Through apartheid planning Durban has various social dilemmas that have been mostly left untreated and it is these situations that architecture has the power to address and improve. A state of improved social sustainability, as has been researched, relies on improving its four primary constituents, and it is these concepts that are the focus here.

1.2 PROJECT DESCRIPTION

The project Rationale reads as follows:

The Bridge City Community Anchor looks to address this by enlarging people's choices in all of life's spheres, promote equity and cultivate civic 'togetherness in order to move society

towards a state of improved social sustainability by developing a community centre that will become an anchoring point in the community that brings people of socially disorientated and segregated communities together.

Within the project rationale one can find the intent to address the four primary constituents of social sustainability. Human wellbeing is being addressed in that the project looks to enlarge people's choices in all of life's spheres, equity is being tackled in that there shall be equal opportunity for all, civil society is addressed through a 'togetherness' that is created and the realisation of the users to empower and inspire each other and lastly democratic governance is challenged through participatory processes and accountability.

Through a concept of 'Thriving Communities through Interaction and Engagement' the primary objective of exploring the link between the built environment and the health of communities is realised. The concept aims to fuse the people of disconnected communities, encourage social connectivity, cohesion and social capital, promote spiritual and mental growth and ultimately move towards a state of improved social sustainability.

1.2.1 Typology

The chosen typology is a 'Community Anchor'. A community anchor is at its heart a community centre with a furthered program and therefore allows for all four of the primary constituents of social sustainability to be further encouraged.

The chosen typology therefore takes the traditional community centre and further adds to it functions that shall address the needs of the direct community. This was done through discussions with the locals and the end users of the site as well as studies of the future Bridge City development and foreseen essential functions. Through the furthered program several things are realised, firstly, as mentioned, all four of the primary constituents of social sustainability can be explored. Secondly, the end buildings reach is furthered into the local community. Many more people are drawn into the project as the building provides for a far greater portion of the community. Thirdly, a more 24 hour occupancy is possible as functions play off each other and activate the site at varying times of the day or week.

Through this extended program and the realisation of the community anchor typology one can transform a civic environment into a great public space, which has huge rewards extending beyond just the space. Civic spaces, when they work well, become an extension of the community. These spaces become an arena for public life if they are guided to function in their proper civic role. They can become spaces for communities to come together, for economic and social interactions to take place, where festivities take place and where people get to know and trust their neighbours. Courthouses, community centres, post offices and libraries can become the ‘front porches’ of the community, where interaction may take place, with government and each other. A thriving civic realm leaves residents feeling a strong sense of community and well connected. A great public or civic space, as proposed in the Bridge City Community Anchor, is to be valued in a urban precinct as it creates a special feeling and identity and therefore relates to and nurtures the surrounding community and brings the public together. Through exploring the four primary constituents of social sustainability a great public space enhances the situations of the users and adds value to its surroundings. Culturally, economically, socially and environmentally, great public spaces contribute all-round to community health and sustainability. This is achieved through adding enrichment to the civic realm in providing an identity, individual feel, unique sense of character and a stage for public activity. This design can and must become an anchor for its community and a focal point for its identity and beginning points for positive growth. All of the described assets provide the foundations for greater community liveability. Great public or civic spaces play benefit to all types of communities and this becomes the building blocks upon which the design tackles social sustainability.

1.3 THE CLIENT

The client for this project is the department of social development which is a department of the KwaZulu-Natal provincial government.

The department of social development is committed to social transformation that is embodied in the principle of social justice and the Bill of Rights contained in the Constitution of South Africa. The department endeavours to create a better life for the poor, vulnerable and excluded people in our society. The departments’ task is to reduce poverty and promote

social integration, develop and monitor the implementation of social policy that both creates an enabling environment for and leads to the reduction in poverty.

1.3.1 Client Brief

As would be written by the client;

The KwaZulu-Natal provincial government through the department of social development would like to tackle the ideas regarding architecture in our urban precincts and the opportunities this built form has on mediating healthy communities.

As the department of social development, social sustainability is a vitally important concept and shall be kept at the forefront of any design decisions made and its four primary constituents being the primary focus of the designs positive outcomes. All four of the primary constituents of social sustainability are to be explored through the design of a community anchor in the developing precinct of Bridge City.

The design is to become an anchoring point for the socially disorientated and segregated communities that surround Bridge City and become a focus point of the communities' social scene and a symbol of its atmosphere. Public space and social interaction is to be of upmost importance in order to bring people together and allow chance encounters to take place, once again fusing the people of the surrounding disconnected communities. As the site is at the gateway to the Bridge City precinct, it is advisable that as far as possible the connections and links into and out of the Bridge City urban centre and the surrounding communities are kept and enlivened.

The design calls for the incorporation of the nearby NGO offices, small library and the disconnected community hall that shall be demolished for the development of a new high school that shall cater for the growing population in the area.

Library component

- The library is to become far more informal as to place emphasis on its public / social characteristics.
- Social spaces are to be established and decorated.

- Spaces created for local community to read, learn, gather and interact as most do not have such spaces available to them.

Rentable office spaces

- Provide rentable office spaces of varying sizes.
- Allow small businesses place to thrive.
- Incorporate a small business centre as to guide business owners.
- Provide all necessary office requirements

Community centre

- Provide space for community gatherings.
- Provide indoor sports facilities.
- Integrate seminar and workshop spaces that are multipurpose in nature.
- Emphasis on social interaction and community.
- Offer all necessary flanking facilities for multipurpose hall, seminar and workshop spaces.

Retail

- Provide retail where applicable as to best activate pedestrian activity.
- Retail of varying sizes as to promote growth.

Site

- Emphasis on community gathering and social interaction.
- Provide spaces for the community to come together.
- Do not disconnect pedestrian flows.
- Activate all spaces.
- Visual policing.

1.3.2 Schedule of Accommodation

LIBRARY			
ROOM		No OF	AREA IN SQUARE METERS
	Store Rooms		700
	Services		80
	Ablutions		150
	General Library		6500
	Reception		100
	Offices	4	50
TOTAL AREA			7600

RENTABLE OFFICES			
ROOM		No OF	AREA IN SQUARE METERS
	Reception	2	100
	Small Business Centre		70
	Ablutions		90
	Offices		1600
	Board Rooms	6	200
	Print Rooms	2	30
	Kitchen	2	30
	Store		30

	Services		30
	Common Spaces		60
TOTAL AREA			2300

RETAIL			
ROOM		No OF	AREA IN SQUARE METERS
	Varied Retail		
TOTAL AREA			1300

COMMUNITY CENTRE			
ROOM		No OF	AREA IN SQUARE METERS
	Multi-Purpose Hall		1000
	Ablutions		80
	Change Rooms		70
	Kitchen		40
	Store Rooms		100
	Seminar / Workshops	4	700
	Office	1	15
TOTAL AREA			2000

1.4 CONCLUSION

The typology therefore stems from the ideas of the four primary constituents of social sustainability together with the researched needs of the directly affected community. Also taken into consideration is the passed, approved and begun development that is Bridge City. The precinct is a largely mixed-use development and little space is found within this commercial expansion for the civic needs of the community. Education is also given little thought, surprisingly so, when the population is expected to grow substantially through its realisation. This proposal therefore considers these shortfalls and uses them as points to positively address.

CHAPTER 2

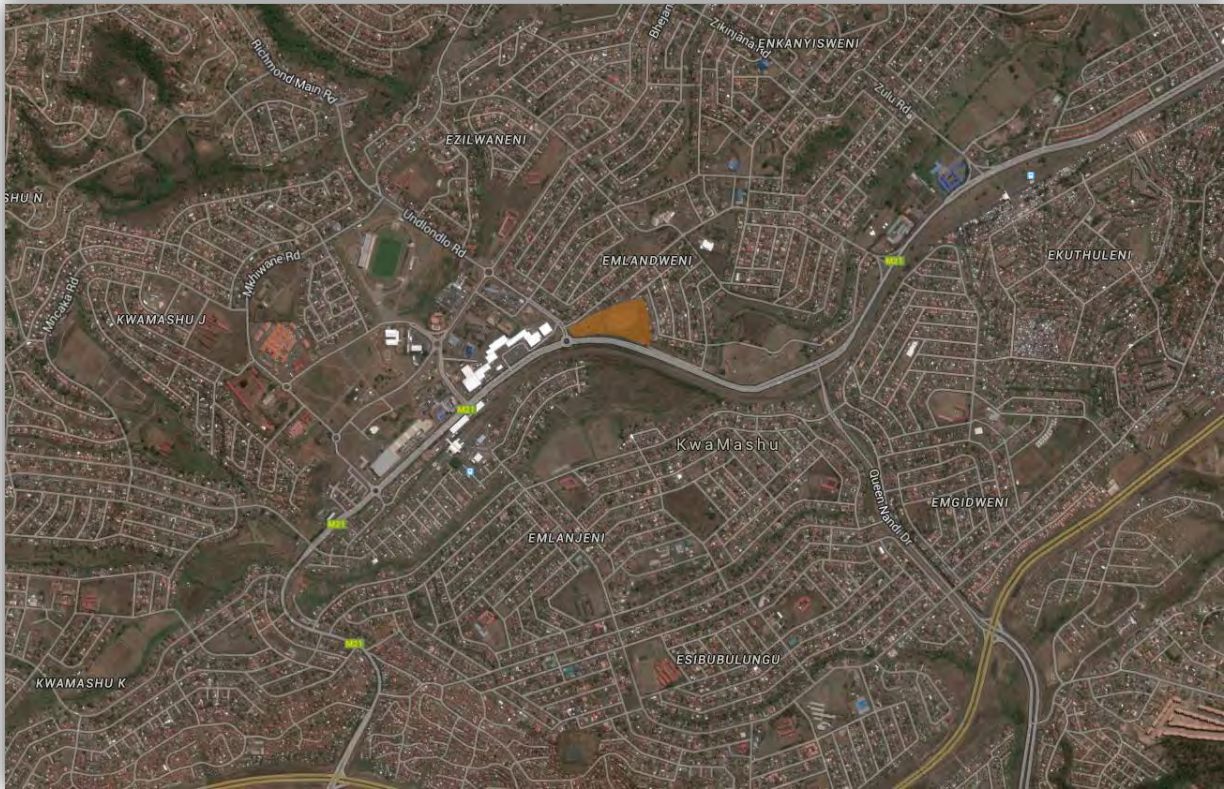
SITE SELECTION

2.1 INTRODUCTION

Through the research came a set of site selection criteria. The criteria is specific to this project and important to resolution of the proposal. A large local community to positively effect is arguably the most important. Without the socially disorientated and segregated community the proposal falls short. The project calls for a large amount of accessibility by both vehicle and on foot, as to be able to bring people together and begin creating a social atmosphere. Within this it is arguably more important to have a larger amount of pedestrian access as the targeted population predominantly travels by foot and public transport. Which highlights the next criteria, public transport. Public transport is a prominent criteria as finding it close to the chosen site meant there would always be foot traffic through and around the site and this made the typology largely accessible to many more people. As the focus of the project is social sustainability, the possibility to address all four of the primary constituents was also a key focus. The chosen site needed to allow for the harder and softer concepts of human wellbeing, be able to allow equal opportunity for all, have the ability to create a strong civil society and reinforce democratic governance.

2.2 SITE OPTIONS

Site Option 1 – Mandela Road (M21) KwaMashu



• Local Community	10
• Vehicular Movement	8
• Pedestrian Movement	7
• Public Transport	6
• Opportunity to address Four Primary Constituents	7
• Nearby Civic Infrastructure	3
Total	41

Site Option 2 – Mafukuzela Highway (M25) Inanda



• Local Community	10
• Vehicular Movement	7
• Pedestrian Movement	6
• Public Transport	6
• Opportunity to address Four Primary Constituents	6
• Nearby Civic Infrastructure	5
Total	40

Site Option 3 – Bridge City Boulevard, KwaMashu



• Local Community	10
• Vehicular Movement	8
• Pedestrian Movement	8
• Public Transport	10
• Opportunity to address Four Primary Constituents	9
• Nearby Civic Infrastructure	7
Total	52

Chosen site – Number 3 - Bridge City Boulevard, KwaMashu.

2.3 SITE SPECIFIC

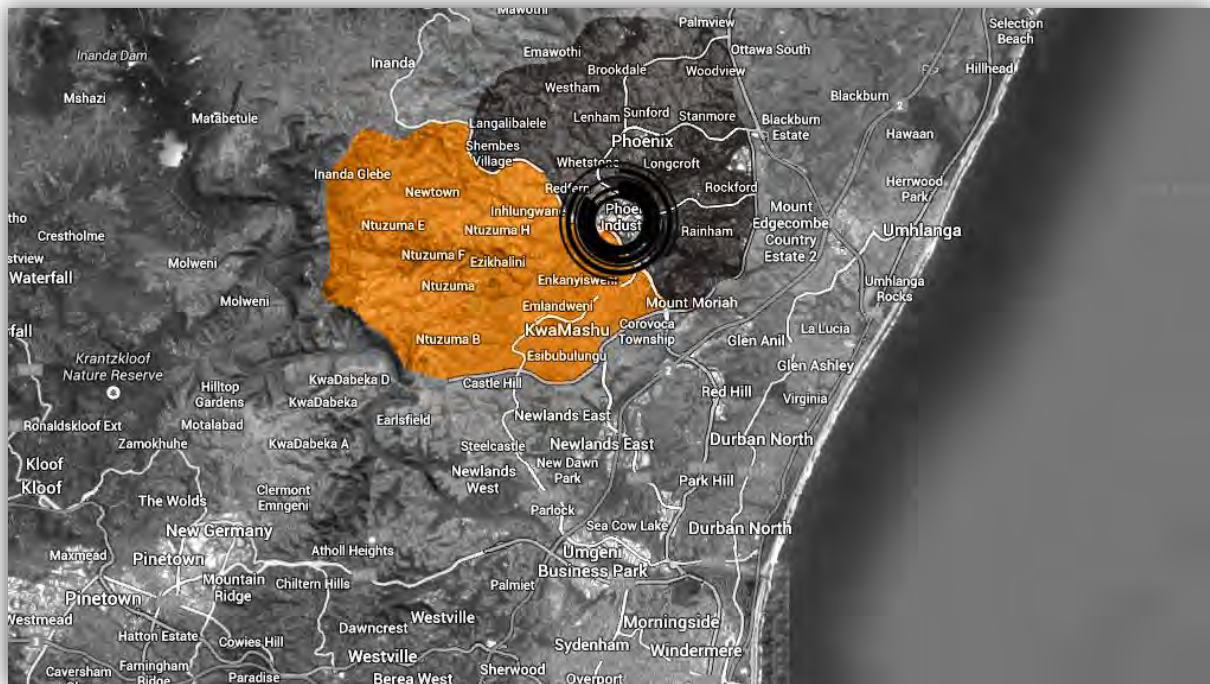


Figure 2.3.1: Community surrounding site. (Author)

Figure 2.3.1 displays the extent to which the chosen site sits at the heart of two of the largest communities in KwaZulu-Natal. These communities are known for the social dilemmas and are commonly found on the most crime struck areas in South Africa. The site, by sitting at its heart, has the potential therefore to become the anchoring point of the community and a central focus point for the people of the area and there social life and happenings.

Figure 2.3.2 illustrates the Bridge City Urban Precinct development (BCD). The site, to its western edge, is at the gateway into the development. The BCD begins tackling a few of the issues of social sustainability and therefore becomes a good starting point for this proposal to grow from. The BCD is largely a mixed-use urban precinct that also houses a few civic buildings - a court, hospitals and other small civic functions. The BCD looks to bring economic development into an area that has been largely unplanned and hugely under developed. Importantly the BCD brings the Bus Rapid Transport system as well as a new train station into the area, both of which are housed around the mall which sits just east of the site.

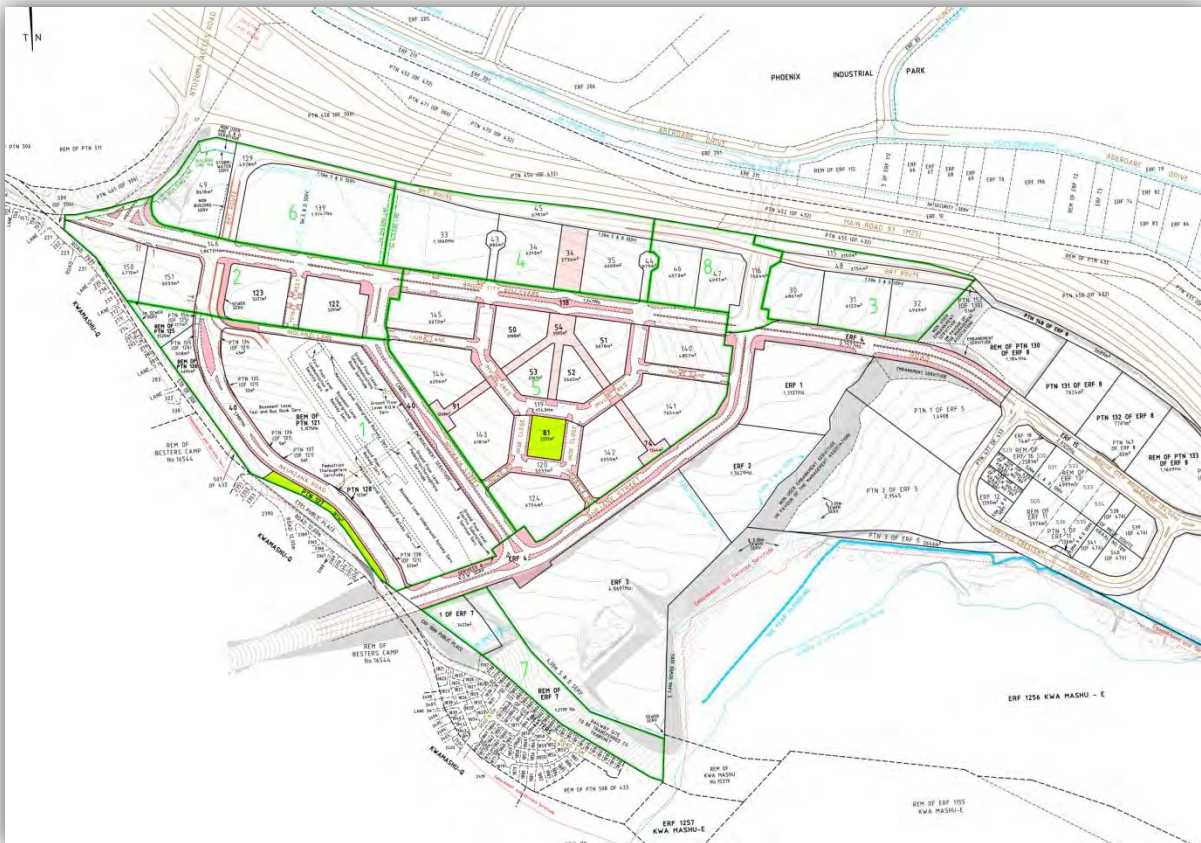


Figure 2.3.2: Bridge City Development. (Wall, Marriott, Paul & Borgen Land Surveyors)

2.4 URBAN DESIGN

Figure 2.4.1 illustrates the urban design proposal for the chosen site surrounds. As the new BCD surrounds the majority of the site, there is very little urban design that needs to be addressed. However, through exploring site surrounds and dissecting the BCD a few things are of importance. Social sustainability speaks of one furthering themselves as to improve human wellbeing. One of the primary ways to achieve this is through education. Schooling in this area is of concern. The BCD further expands the already growing population and schooling was largely unthought-of within the BCD. Two small schools, as shown in figure 2.4.1, are intertwined amongst NGO offices, a small public library, a post office and a disconnected community hall. There is a strong need in the area for an improved and expanded full Primary School and a separate High School.



Figure 2.4.1: Urban design proposal. (Author)

It is proposed that the small and over burdened library, the disconnected community hall and NGO offices be incorporated into this designs proposal and make way for a new and enlarged High School. A new Primary School is proposed for the South Eastern side where the flood plains may be used for their sports fields. This incorporation of the library, offices and community hall begins structuring the accommodation schedule of this proposal.

2.5 CONTEXTUAL ANALYSIS

As figure 2.5.1 shows, the site is largely surrounded by residential area, if one takes into consideration the BCD being mixed-use with everything above the second floor being residential. Therefore it shows great potential in becoming an anchoring point in the community and the social hub of the area. Importantly to note are the Bus Rapid Transport (BRT) line and new Railway line that enter the precinct and have their stations in close proximity to the site. This makes the site hugely accessible by all and a convergence point for movement.

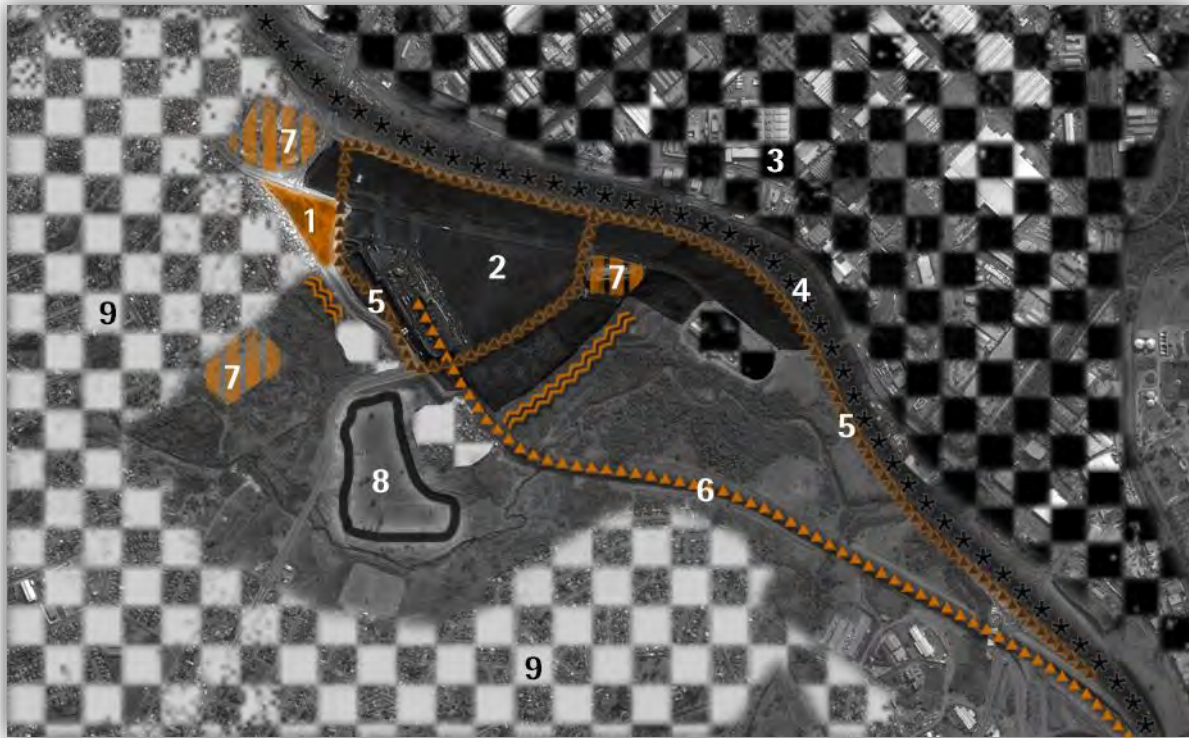


Figure 2.5.1: Contextual Analysis. (Author)

1. Site
2. Bridge City Development
3. Light industrial area
4. Highway. Hard divide
5. Bus Rapid Transport route (BRT)
6. Railway line
7. Civic institutions
8. Cemetery
9. Residential

The highway becomes a hard divide across to the light industrial area and therefore that area does not really ever affect the site, yet at the same time the highway is an access point for vehicular traffic into the BCD and surrounding residential areas. Nearby civic institutions, namely the schools as spoken about before as well as a sporting destination, that is soon to be upgraded, are linkages this proposal may reach to, to further activate and work in harmony with.

2.6 SITE ANALYSIS

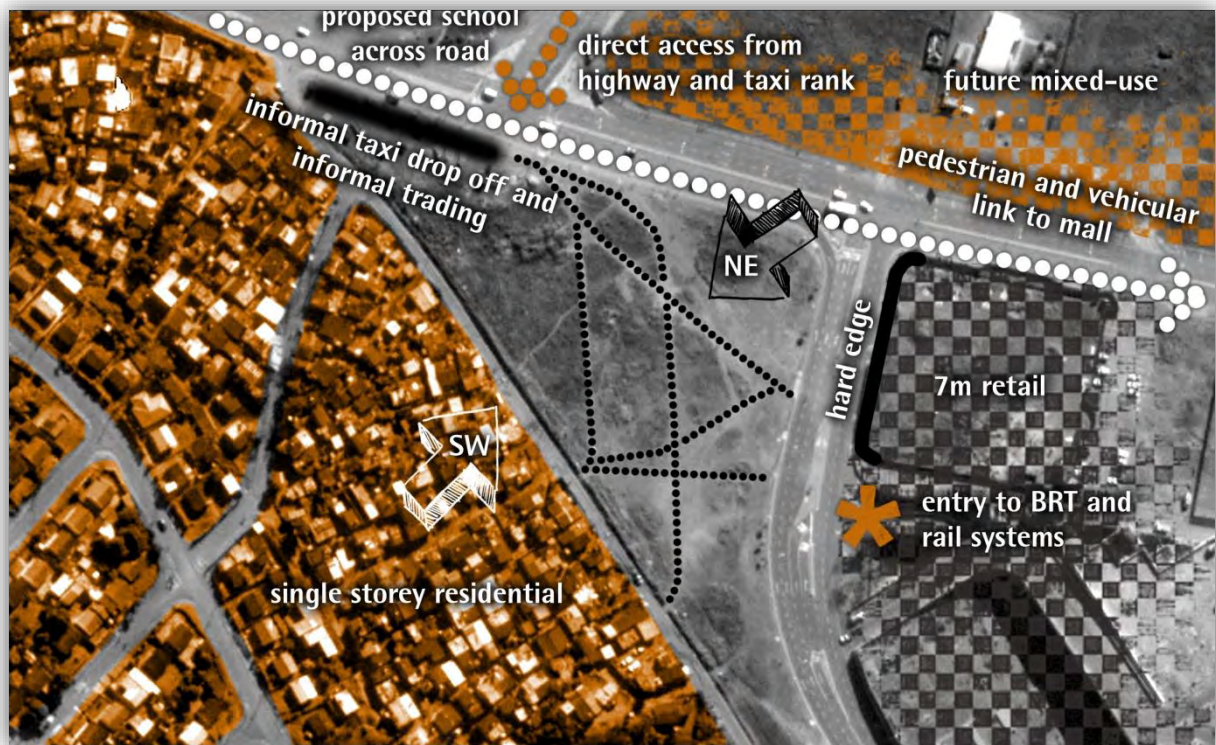


Figure 2.6.1: Site Analysis. (Author)

As shown in figure 2.6.1 the main points to highlight in regards to the site analysis are:

The site becomes the gateway into the BCD. Therefore all traffic whether by foot or by car moves on, around or through the site as it stands. As can be seen on the existing site (illustrated by black dots) pedestrians currently use the site as a movement pathway to their destinations. The main road to the North of the site is the main road through the BCD and therefore a heavily used pedestrian and vehicular route which this proposal uses to activate its retail edges. With the existing mall, existing railway line (housed in the mall) and the proposed BRT system all just to the East of the site, the site becomes the intermediary point of a major convergence zone. This is used within the design to activate the sites social atmosphere. By allowing people to continue moving through the site, rather than restricting flow, and using this consistent foot traffic the proposal becomes hugely activated and a constant source of goings-on.

To the South and West is found mostly single storey residential developments. This low scale is a key contributor to the designs final outcome as human engagement is instilled by reacting to the scale of the surrounding built form. The surrounding community members are far more likely to accept and feel a ‘sense of place’ in a development that speaks to their situation and scale. To the North and East is found the BCD, which becomes a far greater scale. The site therefore becomes a transitional zone between these two scales and each is reacted to in order to find a balance and make the transition smoothly.

2.7 CONCLUSION

As is seen, the site has a very particular set of circumstances that begins moulding and shaping the design before its onset. It is these transitional zones, convergence points, links and connections that are sculptured as to begin the design process.

CHAPTER 3 DESIGN DEVELOPMENT AND RESOLUTION

3.1 INTRODUCTION

Although the site has its particular set of possibilities and mediating circumstances, added to this is the theoretical background of social sustainability. Together, site realities and the theoretical background lay a strong foundation for the design development and resolution.

3.2 THEORETICAL FRAMEWORK

Social Ecology Theory

Social Ecology regards the relationship between the built form and an individual's wellbeing. Architecture has the ability to refine and define and thereby influences human feeling and consciousness and we all are shown to identify with meaningful environments. This directly transforms into the design in that here is created an environment that is sculptured for the communities use. A local atmosphere is created in order for the people of the surrounding community to feel they can relate and be at ease within such a setting. Individuals and community wellbeing is directly addressed through creating built forms that positively influence and sculpture daily life, whether it is through reduced travel times, being more socially active or softer concepts such as being in touch with green spaces.

Emphasis is placed on human engagement through retained human scale. In order for the built form to continue to draw people in and be an inviting and comfortable place for the people of the community, human scale was to be addressed. Building forms are manipulated in such ways as to both react to the surrounding built form yet at the same time still allow for the large building functions to take place without becoming over powering or alien.

Focus is placed on local activities and the habits of the community to unify its members. Local activities such as sporting events, gathering and retail habits are all focal points yet it is also the needs of the community that are to be understood as to create the final functionalities of the civic institution. By understanding the local community and end users habits and requirements, cements the longevity and use of the proposal as it is a much wanted asset and something that may anchor and portray community pride and value.

Social Capital Theory

Social capital is formed by involvement of individuals in the community and the extent to which they know and trust the people around them and the many social interactions happening between them and is bolstered by community cohesion. This is a key theory in the design development of this proposal. The benefits of knowing and trusting the people around

you, and the ability for people to empower and inspire each other, is a great step towards reaching a state of improved sociability. As importantly, it is the built form that mediates these relationships between individuals and allows citizens to meet and chance encounters to take place. The built form within this proposal is sculptured in such a way as to best bring people together and allow this social atmosphere to reach as many people within the community as possible. Social capital is a support structure that, especially in marginalised communities such as those around the BCD, allows people to improve their situation. Through social ties job references are hand on, community policing is strengthened and life is made that little bit easier and lives are furthered.

Participation Theory

Participation theory is a move towards a locally sensitive approach rather than top-down one of many new developments. Community empowerment is at its forefront, developed through the involvement in evaluating, planning, deciding and thinking. This move towards a people centred development effects individuals in that it enhances their sense of ownership and pride in the new development and instils accountability. This theory brings equality and begins to tackle the ideas of both the before mentioned theories. Participation theory begins to bring people together and starts the discussion between individuals of the same community.

Through participatory approaches, building functions and outcomes are focused on the needs of the community and this goes a long way to unifying its members and crating the best environment possible to bring people together in a comfortable environment. Through participatory approaches the end user is understood and requirements are best recognised.

3.3 CONCEPT

Concept: Interaction - Thriving Communities through Interaction and Engagement.

The concept stems from the realities of the site as well as the theoretical framework. In order to achieve a state of improve social sustainability and thoroughly tackle the four primary constituents of social sustainability it is clear that the design needs to bring people of the

surrounding community together, hence the concept of interaction. Interaction can be regarded in several ways. Interaction is foremost the interaction of individuals and communities, bringing people together to allow people to meet, build social capital and feed off the positive effects this can bring.

Secondly interaction can be read as the interaction between the built form and individuals. As is stated, architecture mediates social interactions, and it is this interaction between the built form and individuals that is tackled in order to best bring people in, around and through the site to engage with each other.

Thirdly, interaction can be read as the interaction between various building functions. Building functions of varying nature become interactive and therefore draw a larger portion and more varied end user onto the site. This interaction of building functions, whether physically or through transparency exposes users to functions they might not otherwise be exposed to. It is a reality of the area that many of the locals have never been to or seen a library, and through transparency on primary circulation routes the proposal exposes them to this function and allows natural human curiosity to draw people in.

Fourth, as is discussed within the site analysis, is the interaction of scales. As the site becomes a transitional zone between two very different scales, it is this interaction that becomes very important and has a large mediating role on the design. As human scale and interaction is of utmost importance it is the reaction to these scales that becomes inevitably significant.

Lastly, is the interaction between the BCD and the existing surrounding community. As the site becomes a convergence point and a gateway in and out of the BCD it is very important to take into consideration the interaction between the two. This interaction and movement between the two becomes the life blood on which the proposal flourishes. The constant pedestrian and vehicular movement between the two is what sculpts the vast amount of public life and individual interaction.

3.4 DESIGN DEVELOPMENT

3.4.1 Main Ideas

As shown, one may move towards a state of social sustainability, and begin instilling its four primary constituents, through interaction and engagement. So how does one begin to achieve interaction and engagement in the design? Four main ideas have been developed in order to achieve this.

1. Manipulating Movement



Figure 3.4.1: Manipulating movement through building masses. (Author)

The site and the way it is being currently used, its potential future use and the way it works within its context and surroundings was watched and studied. Its draw cards, anchoring points, links, patterns and connections were all noted and understood. The question asked was, where it is possible for the built form to manipulate its user into an interactive and engaging experience and how may the site and building mass best take advantage of its situation as to create the most possible positive human interaction?

As the site is a gateway and high movement zone its links, patterns and connections between three main anchors are used to sculpture the architectural massings. Pedestrian pathways are sculptured to guide passer-byres through, in and around the new development as to best provide opportunities for chance encounters, social gatherings and exposure to the buildings uses. By placing the main social heart of the complex in the centre, passer-byres are drawn in through curiosity. By allowing people in and through the site rather than restricting the flow through incorrectly placed built form this insures the constant activation of the site and therefore its functions. As people use these movement patterns on a daily basis as they walk to and from public transport on their way to work every day they provide the interaction necessary to develop economic, social, cultural and other events that may begin to equip the design with the necessary tools for social upliftment.

2. Negative and Positive Spaces



Figure 3.4.2: Movement paths flanked with social spaces. (Author)

“The shapes and qualities of architectural spaces greatly influence human experience and behaviour, for we inhabit the spaces of our built environment and not the solid walls, roofs and columns that shape it. Positive spaces are almost always preferred by people for lingering and social interaction. Negative spaces tend to promote movement rather than dwelling in place (Matthew Frederick, 2007).

Taking this into consideration, all movement, or negative spaces, are flanked by positive, or lingering spaces. As discussed the site sees a lot of daily movement and therefore there are strong movement patterns. However these movement patterns will see people moving only through them if the individuals are not promoted to linger. These positive spaces then become softer, greener and more relaxing spaces where people can sit or enjoy the opportunity to meet and gather.

The shapes of the outdoor spaces within the proposal are not accidental. The focus here is to shape public space first and foremost and the built form massings become secondary to this as to best provide positive social gathering spaces for the community to come together in and use.

3. Reacting to scale of surrounds

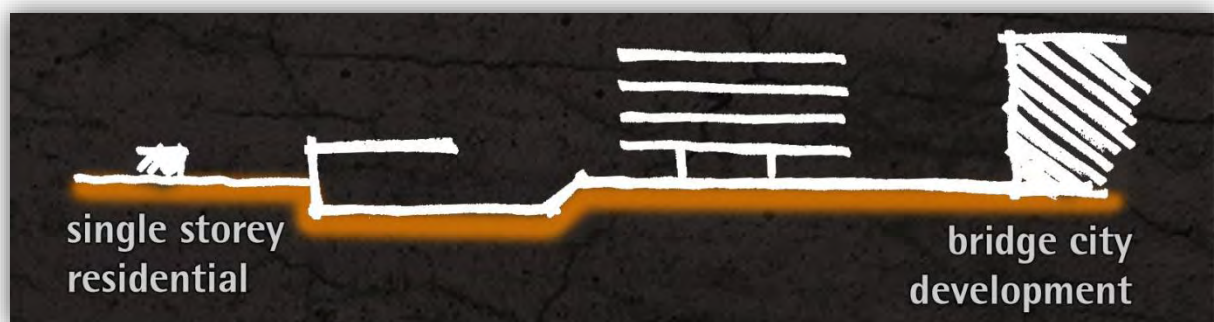


Figure 3.4.3: Scale transition. (Author)

As previously mentioned human engagement is instilled by reacting to the scale of the surrounding built form. The surrounding community is far more likely to accept and feel a ‘sense of place’ in a development that speaks to their situation and scale.

This is achieved in several ways, one of which is lowering the community centre to a ‘lower ground floor’ level, keeping a reactive scale to the single storey residential community to the

south while creating a more bold architectural scale in reaction to the BCD around the remainder of the site. Human scale is further instilled on these taller massings by creating either colonnades or overhangs that give the ground floor uses a more engaging scale rather than the sheer face of a taller scale.

4. Intertwined Program Focusing on the Needs of the Community

The most common benefit of this is an extended program that allows for a more 24hour usage while at the same time having a further reach into the community, drawing more people in. The library, community centre and all other uses are intertwined to allow users of one function to be exposed to other functions. Building functions are not always physically connected, but visual connection and movement flows are used to introduce users to all functions.

Functions are further intertwined by taking the idea of ‘community’ or social interaction into the library and in turn taking the idea of learning, education and betterment to the community centre. The library moves away from the traditional ideas of what a library should be and becomes far more informal, a community reading room of sorts, a space where people can come together in a common cause. The idea of learning, education and self betterment is in turn transferred across to the community centre where one has the opportunity, through the small business office, and the skills development classes held in the seminar and workshop spaces to develop from an informal trader to ultimately renting office space and ultimately developing the economic opportunities of the local community members.

3.4.2 General Design.

Apart from the implementation from these four main ideas, a few other mentionable points in the pursuit of interaction are as follows.

As the community centre is dropped to ‘lower ground floor’ the opportunity was created to use the roof top space. A ‘community playground’ was created. Many people in the surrounding community do not have space or place for social gatherings to happen in and around their houses, so a space is set up here for the community to gather, social or sporting events to play out and most importantly a space for people to meet and greet.

Stairs are used, both on the 'community playground' and elsewhere throughout the site and within the library as a gathering space. It is observed that people use stairs for seating and lingering and therefore this was taken advantage of. Stairs that are used to get onto the 'community playground' are also used to draw people from the community out and use them as seating spaces. Once drawn this far it is inevitable for the user, through natural human curiosity to venture up onto the roof. Similarly steps are used with the social heart of the site as not only movement pathways but seating for the external stage space and gathering spaces of varying nature. Vertical circulation within the library is flanked by large seating stairs as to promote people to sit, read a book and talk.

The social heart of the design, with its focus the exterior stage or auditorium, is the main focus of the social nature of the design. People are drawn through to this point, whether by movement pathways or transparency to a social hub of activity. Formal and/or informal performances bring people together. This social scene is taken advantage of by flanking these areas in restaurants and other recreational activities. The social heart is also used to expose people to the varying building functions housed within the design. Large viewing windows from both the library, seminar and workshop spaces and community hall all open out onto this space and present themselves to the user.

A pedestrian tunnel is set up on the east side as to create a direct pedestrian flow directly into the social realm. This constant flow of pedestrians is guided through the social heart of the site where they are promoted to interact with each other and the building functions.

As was the case with the 'community playground', a 'community reading room' is provided. Many people in the area do not have spaces within their houses for quiet reading areas, homework areas or even gathering spaces. The lowest level of the library is used to provide for exactly this. These spaces become very much informal. They represent residential libraries rather than their public counterparts. Lounge spaces, informal seating and bean bags create spaces that promote gathering and interaction rather than the very formal nature of aligned seating and silence.

Visual interaction is a key concept in reinforcing interaction. Functions are exposed to passer-byres through visual connection. Large viewing windows are created in several areas to create visual links into building functions. This is reinforced by pulling solar shading

away from the building envelope and allowing the visual connection to remain unbroken. Solar shading then rather becomes a geodesic structure that allows for this to happen.

3.5 TECHNICAL RESOLUTION

Construction methods are kept fairly standard throughout. Labour based methods and technologies are implemented to ensure employment intensive construction works. As long as South Africa has high unemployment rates and large amounts of unskilled labour this technique will remain the most sustainable solution.

Two technologies that do not fall into this category are discussed below.

Geometrica solar shading solution

Geometrica is a steel space frame solution that is light weight, largely self supporting and can be made up into any shape needed. Geometrica domes and space frames may be clad in anything from roof sheeting, glass or as in this case solar shading options.

As used within this proposal the Geometrica space frame is to be clad in GreenScreen Revive, Hunter Douglas shading fabric. 100% PVC-free polyester, 100% recycled materials, a combination of post-industrial and post-consumer plastic waste. The perforation detail is be used as a community involvement project, where unemployed members of the local community are paid for each panel that they complete to the correct quality. These solar shading panels are then fixed to the space frame as per manufacturer's specifications.

In figure 3.5.1 below can be seen the standard details of the Geometrica space frame as proposed.

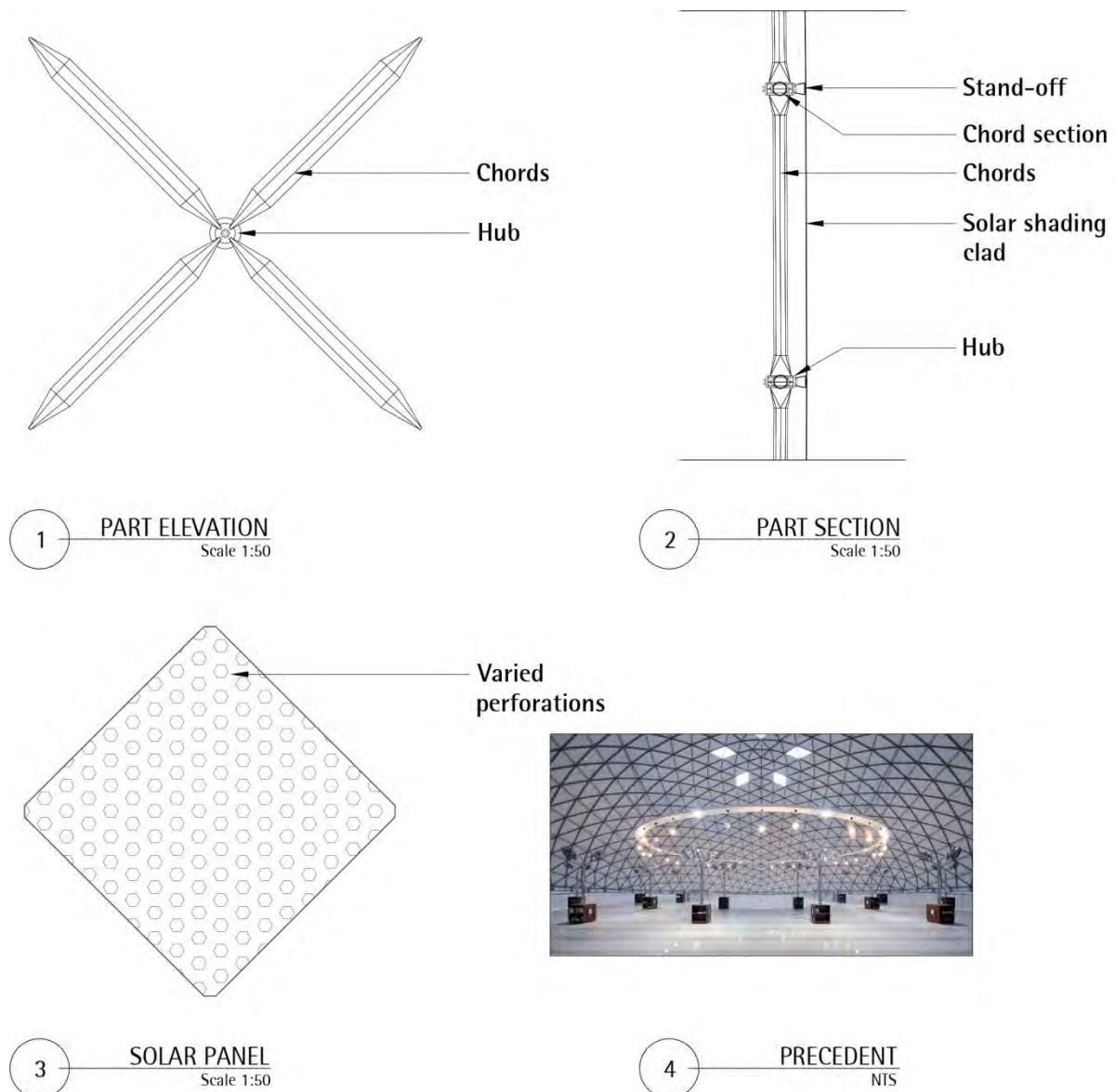


Figure 3.5.1: Geometrica solar shading detail. (Author)

Accessible escalator

The accessible escalator is similar to a standard escalator design but on which are made a series of outstanding innovations. Users without impaired mobility will be able to use the escalator in the same way as they use the current ones. However, when a person with impaired mobility who uses a wheelchair needs to use the escalator, he or she will press a button to make three stairs of the escalator move together vertically to form a flat platform that can accommodate the wheelchair. Once the user is on the platform with the wheelchair

perfectly positioned the escalator will move until the user reaches the end. When the user leaves the escalator, the platform will convert back into three independent stairs.

The use of the accessible escalator cements the idea of equity. Disabled or fragile members of public are able to use all of the proposals facilities as easily as a able member.

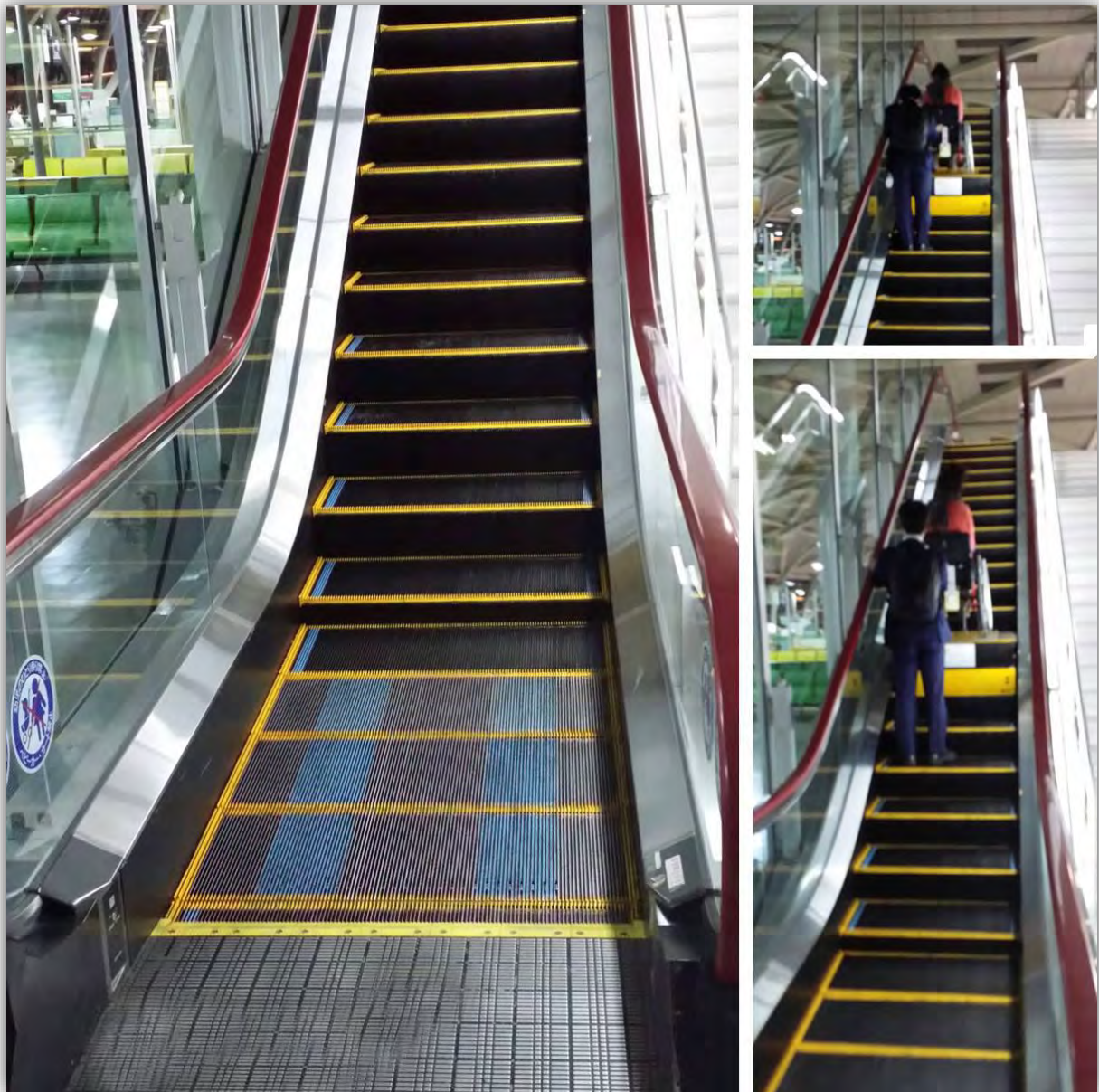


Figure 3.5.2: As used in the Kansai International Airport – Japan. (www. pbs.twimg.com)

3.5 CONCLUSION

A state of improved social sustainability is met in that the four primary constituents of social sustainability are provided for in the following ways.

Human wellbeing – All spheres of life are furthered, including economically, socially, culturally and environmentally.

Equity – Equal opportunity is created for all. Opportunity is created through educational betterment through facilities such as the library and seminar/workshop spaces. Economic opportunity is created equally with economic possibilities from small informal trade through to rentable office spaces, all of which are endorsed to succeed through the easily accessible small business centre.

Civil Society – A social atmosphere is achieved throughout. People are promoted to gather, interact and feed off the positivity that comes from this.

Democratic Governance – Space is created for the community and governance to interact freely and transparently.